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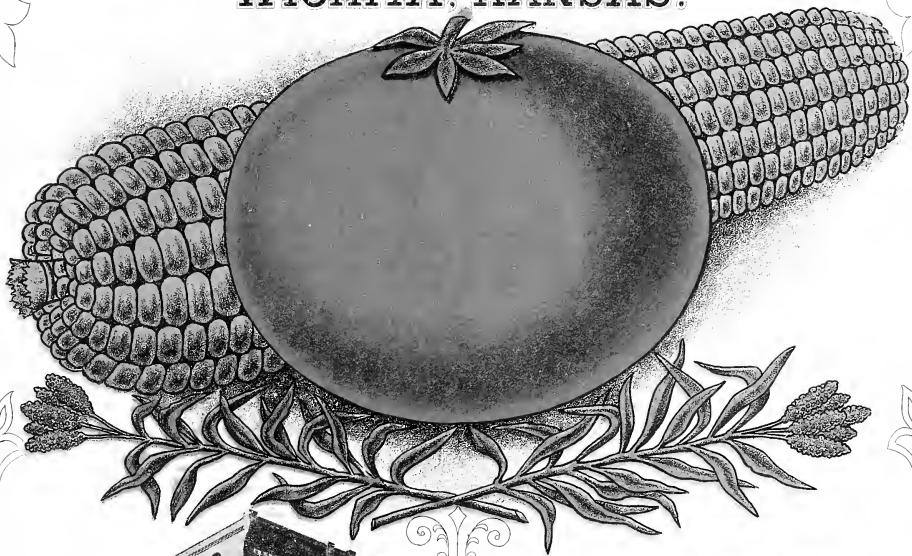
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HOME OF "MARCO"  
AND  
"X-SEED-AL" BRAND SEEDS

1920

1920

# MARLOW SEED COMPANY

WICHITA, KANSAS.



WAREHOUSE AND CLEANING PLANT



RETAIL STORE

# MARLOW SEED CO.

## SPECIAL "MARCO" BRAND

## GARDEN SEED COLLECTION

**\$1.00** FULL \$1.50 VALUE,  
POSTPAID, FOR **\$1.00**

### The One Best Vegetable of Each Variety.

1 Pkt.	Marlow Seed Co. Early Provider Beans.....	\$0.15
1	" Marlow Seed Co. Golden Rust-proof Wax Beans....	.15
1	" New Early Delicia Peas (need no sticks).....	.15
1	" New Prosperity Peas (need no sticks), best of all....	.15
1	" Early Golden Bantam Sweet Corn, see description....	.15
1	" Stowell's Evergreen, the main crop Sweet Corn.....	.15
1	" Table Beets (Banquet), very dark red, early.....	.15
1	" Table Beets (Blood Turnip), best for late summer and fall.....	.10
1	" Best Early Cabbage (Joffre).....	.15
1	" Best Fall and Winter Cabbage (Superior Late Flat Dutch).....	.10
1	" Stevens' Perfect Cucumber, early and prolific.....	.05
1	" Long Green Cucumber, the old stand-by.....	.05
1	" Lettuce (Big Boston), see description, Catalog.....	.05
1	" New Ponderosa, finest Turnip Radish in cultivation....	.10
1	" White Icicle Radish, nothing finer in Radishes.....	.10
1	" New Tomato (Early Sunrise), see description, Catalog.....	.10
1	" Water Melon (Tom Watson), unequaled.....	.05
1	" Netted Rock King Cantaloupe.....	.10

**Total Full Value.....\$1.50**

The Marlow Seed Co. will deliver to you anywhere in the United States this MARCO BRAND GARDEN Collection of Garden Seeds. They are of SUPERIOR QUALITY and are particularly adapted for the use of the town and suburban garden. With but little work, you can have fresh vegetables from your own garden from April until October and you will be doing your share to increase the world's food supply. Help others by helping yourself.

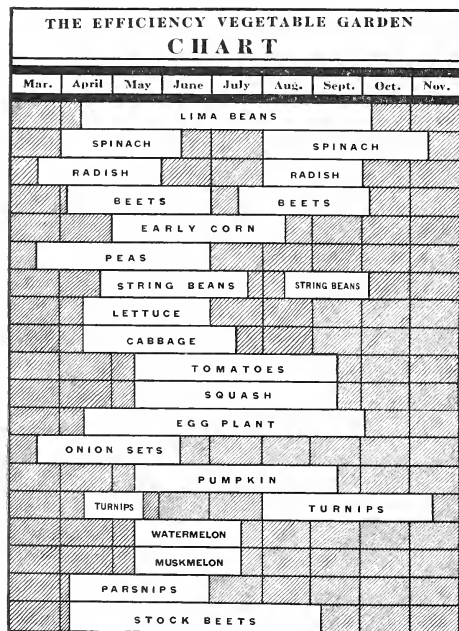
Our Marco Brand Collection was made with the view of making it easy for everyone to have a garden and to have vegetables not only for the immediate need, but by the proper care and distribution of the ground and seed to be able, like the squirrel, to lay by for the winter a good supply. The seed in this Collection will plant an average size garden.

### This Chart Will Show You When to Plant and the Time of Maturing.

For example: The first item, Lima Beans, plant the middle of April, and so on. Plant Peas, Beets, Radish and Lettuce in rows 18 inches apart. As soon as one row is gone, plant another, and the same way with the other seed. Study the Chart and make your ground produce its utmost this year, as you will need it.

Cabbage and Tomato seed can be planted in boxes inside as soon as you like. Set the plants the last of April, in rows 3 feet apart. Then plant Radishes, Beets, Peas and Beans between the rows.

We have only put the main varieties of Seeds in this Collection, and for anything else you might want pick from the Catalog.



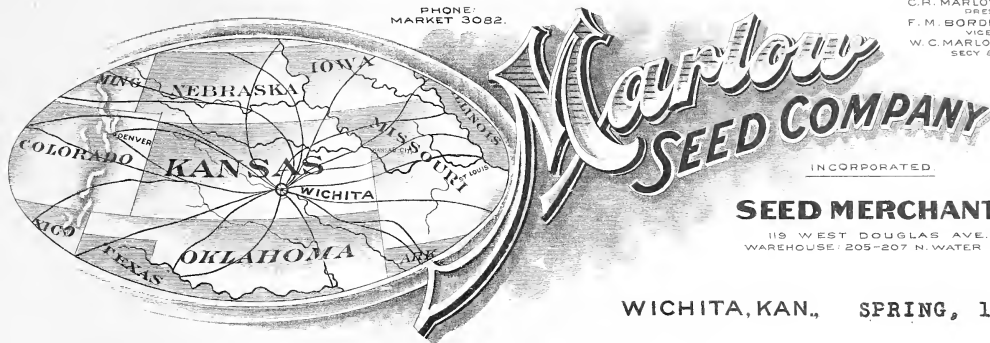
**Eat Our Parcel Post Collection.**  
**365 Square Meals for One**  
**Dollar. A King's Banquet**  
**at a Ha'-Penny.**

**MARLOW SEED COMPANY**  
**WICHITA, KANSAS**



PHONE  
MARKET 3082.

C. R. MARLOW,  
PRESIDENT  
F. M. BORDERS,  
VICE PRES.  
W. C. MARLOW,  
SECY & TREAS.



WICHITA, KAN., SPRING, 1920

Dear Friends:

The Family that had a Home Garden in 1919, with their fresh vegetables and fruit during the Spring, Summer and Fall, and that now have their pantry shelves filled with canned goods from the garden, is indeed a fortunate one.

You are paying today enormously high prices for all kinds of fruit and vegetables, and these high prices will surely continue for a long time to come. Why not beat the High Cost of Living by planning at once for a Home Garden of your own?

The Home Garden is no longer an experiment, but a proven success as thousands of families have realized, and those who have gone to the slight trouble of having their own garden are not dependent on the grocer or huckster for their daily needs.

Plan NOW to raise enough vegetables and fruit this year to supply your table until Fall and to fill your pantry with enough canned goods to last throughout the Winter.

You will be well repaid by having vegetables and fruit the year around at a nominal cost. The Home Garden brings health, wealth, and prosperity. Eat more vegetables and fruit and RAISE THEM YOURSELF.

Yours very truly,

MARLOW SEED COMPANY,  
Wichita, Kansas.

HOME OF "MARCO"  
AND  
"X-SEED-AL" BRAND SEEDS





SEND BY

Date..... 1920

AMOUNT ENCLOSED

**Your Name**

P. O. BOX, STREET  
OR RURAL DEL'RY

## Post Office

County \_\_\_\_\_, State \_\_\_\_\_

Station or Exp. Office

(Only if different from P. O.)

**P. O. Money Order.**

Check or Draft

Cash

Stamps.

Postoffice Money Orders, Express Money Orders or Registered Letters are absolutely safe methods for sending money. For small orders send postage stamps.

[illegible]

Kindly write name of a friend who may be interested in planting Seeds, Fruit Trees, or Flowers.

Name \_\_\_\_\_

Town \_\_\_\_\_ State \_\_\_\_\_

Street No. \_\_\_\_\_ R. F. D. No. \_\_\_\_\_ Box No. \_\_\_\_\_

[illegible]

# THE EVOLUTION THAT WE HAVE ALL WITNESSED

## The Lord Helps Him Who Helps Himself

THERE WAS A TIME, within the memory of the average adult, when the average back lot was prim with rows of corn, potatoes, beans, cabbages, peas, tomatoes—all rugged members of the vegetable family and qualified to set the dining table a-groaning. There was a time when the farmer smoked—with hickory, mind you—his own hams; when mother and the girls made the kitchen unapproachable with their canning, filling the air with the redolence of fruits and vegetables.

There were winters with everything snuggled down tight and warm. The cellar held its barrels of apples and its bin of potatoes; the shelves were packed with jars of things to eat. Then entered a process, or the development of a process, called division of labor. Mother visited the grocery one day and asked the cost of canned tomatoes. She took her pencil and discovered to her horror that many persons, everyone charged with a special act in the process of canning tomatoes, could prepare them cheaper than she could by carrying out the process alone. So she left off putting up tomatoes and bought them. Carrying her investigation into various foods, she found she could buy them cheaper than she could produce them. So mother began buying her vegetables, fruit, eggs, and chickens.

The new process extended to towns and cities with enormous strides. Living became luxurious. One had only to push the button, and ice, milk, groceries, and meats appeared as if by magic. Suddenly something snapped. It was the snap itself which snapped. Prices went up, and the luxurious recipient of these favors found himself in the middle: too far from the base of operations—the *cow* and *garden patch*. In the days when he had the cow and garden patch, he was safe behind a fortification that couldn't be taken; but when he sold the cow and the garden went to weeds, he had cut himself off from reinforcements, got clear away from the protecting walls, and in the land of the enemy.

The division of labor, which seemed such a beneficent thing to mother when she discovered the technique of such quantity production, began to develop new complications. Each worker in the complex process and each machine employed began to make such demands that the meek and unobtrusive garden, the very heart and soul of the industry, was entirely lost sight of. Truly astonishing to father, who had to pay. Continuously astonishing when he recalls the rows of canned vegetables and fruit in the pantry.

We are wondering if the tendency is ever going to swing back to that day of self-help. Sometimes we think so; again there is the thought that we are steadily drifting farther away. Eggs 50 cents a dozen—5 cents apiece—convinces the householder of the utility of a few hens; and potatoes at \$1 a bushel is making the housewife turn to the garden.

The pendulum is swinging. In the trip from the garden to the kitchen, the profits are too many. THE PEOPLE ARE FINDING IT OUT AND ARE REPLACING THE GARDEN WHERE IT ONCE WAS—AT THE KITCHEN DOOR.

# VALUABLE INFORMATION.

## TIME REQUIRED FOR VEGETABLES TO BE READY FOR USE.

	Days.
Beans, Dwarf.	40 to 50
Beans, Pole.	70 to 80
Cabbage, Early.	80 to 100
Cabbage, Late.	100 to 120
Carrots.	60 to 70
Cauliflower.	70 to 90
Celery.	100 to 150
Corn, Sweet, Early.	60 to 70
Corn, Sweet, Late.	75 to 90
Cucumbers.	50 to 60
Egg Plant.	120 to 130
Kale.	50 to 65
Lettuces.	40 to 50
Melons, Water.	70 to 90
Cantaloupe.	65 to 80
Okra.	50 to 60
Parley.	50 to 60
Onions.	80 to 115
Peas.	50 to 75
Peas, Summer.	80 to 90
Radish.	22 to 45
Salsify.	90 to 100
Spinach.	45 to 60
Tomato.	80 to 90
Turnip.	90 to 120

## QUANTITY OF SEED REQUIRED FOR A GIVEN NUMBER OF HILLS.

	Hills.
Pole Beans.	1 qt. to 50
Corn.	1 qt. to 200
Cucumbers.	1 oz. to 125
Watermelons.	1 oz. to 40-50
Muskmelons.	1 oz. to 75-100
Pumpkins.	1 oz. to 60-90
Squash.	1 oz. to 60-80

## TABLE SHOWING THE AMOUNT OF SEED NECESSARY FOR AN ACRE, AND THE NUMBER OF POUNDS TO THE BUSHEL.

	No. Lbs. to Bu.	No. Lbs. to Acre.
Red Clover.	60	12 to 15
White Dutch Clover.	60	5 to 8
Alfalfa.	60	20 to 30
Esparrlette.	24	40 to 45
Alsike Clover.	60	5 to 8
Timothy.	45	10 to 15
Hungarian.	45	24 to 36
Millet.	50	25 to 50
Red Top.	14	10 to 15
Orchard Grass.	24	20 to 42
Kentucky Blue Grass.	14	14 to 42
Johnson Grass.	25	25 to 30
Fine Mixed Lawn Grass.	14	40 to 70
Hemp.	30	20 to 60
Flax.	50	28 to 42
Buckwheat.	50	25 to 50
English Blue Grass.	22	25 to 28
Oats.	32	32 to 66
Barley.	48	65 to 96
Corn.	56	8 to 10
Eye.	56	56 to 72
Wheat.	60	60 to 90
Sugar Cane, broadcast.	50	6 to 8
Peas, Field.	30	50 to 75

## AVERAGE QUANTITY OF SEED SOWN TO AN ACRE.

	In Drills.	Busheis.
Dwarf Beans.	1 1/4	31
Early Peas.	1 1/2	32
Marrowfat Peas.	1 1/4	33
	Pounds.	
Beets.	4 to 5	34
Carrots.	2 to 3	35
Onions.	4 to 5	36
Onions for Sets.	50 to 70	37
Onion Sets.	8 to 10	38
	Busheis.	
Potatoes (cut tubers).	8	39
	Pounds.	
Parasnis.	4 to 5	40
Radishes.	6 to 8	41
Rutabagas.	1 1/2	42
Spinach.	20 to 30	43
Salsify.	6 to 8	44
Turnip.	1 to 1 1/4	45
	In Hills.	
Pole Beans.	12 to 15	46
Corn.	8 to 10	47
Cucumbers.	2 to 3	48
Muskmelons.	3 to 5	49
Watermelons.	3 to 5	50
Pumpkins.	5 to 6	51
Squash.	4 to 5	52

## PARCEL POST.

Rates of postage on fourth-class or parcel post matter, to be fully prepaid, unsealed, are as follows:

(A) Parcels weighing 4 ounces or less, except books, seeds, plants, etc., 1 cent for each ounce or fraction thereof, any distance.

(B) Parcels weighing 8 ounces or less containing books, seeds, cuttings, bulbs, roots, scions, and plants, 1 cent for each 2 ounces or fraction thereof, regardless of distance.

(C) Parcels weighing more than 8 ounces containing books, seeds, plants, etc. parcels of miscellaneous printed matter weighing more than 4 ounces, and all other fourth-class matter weighing more than 4 ounces, are chargeable, according to distance or zone, at the pound rates shown in the following table, a fraction of a pound being considered a full pound.

Parcel-post mail requiring 25c or more of postage (not counting insurance fee) will require a war tax of 1c for each 25c or fraction thereof. On parcels less than 25c no tax is required.

Wt., Lbs.	First Zone.		Zones.						
	Local Rate.	Zone Rate (50 M.)	2nd 150 M.	300 3d M.	600 4th M.	1000 5th M.	1400 6th M.	1800 7th M.	Over 8th 1800 M.
1	\$0.50	\$0.05	\$0.05	\$0.06	\$0.07	\$0.08	\$0.09	\$0.11	\$0.12
2	.06	.06	.06	.08	.11	.14	.17	.21	.24
3	.06	.07	.07	.10	.15	.20	.25	.31	.36
4	.07	.08	.08	.12	.19	.26	.33	.41	.48
5	.07	.09	.09	.14	.23	.32	.41	.51	.60
6	.08	.10	.10	.16	.27	.38	.49	.61	.72
7	.08	.11	.11	.18	.31	.44	.57	.71	.84
8	.09	.12	.12	.20	.35	.50	.65	.81	.96
9	.09	.13	.13	.22	.39	.56	.73	.91	1.08
10	.10	.14	.14	.24	.43	.62	.81	1.01	1.20
11	.10	.15	.15	.26	.47	.68	.89	1.11	1.32
12	.11	.16	.16	.28	.51	.74	.97	1.21	1.44
13	.11	.17	.17	.30	.55	.80	1.05	1.31	1.56
14	.12	.18	.18	.32	.59	.86	1.13	1.41	1.68
15	.12	.19	.19	.34	.63	.92	1.21	1.51	1.80
16	.13	.20	.20	.36	.67	.98	1.29	1.61	1.92
17	.13	.21	.21	.38	.71	1.04	1.37	1.71	2.04
18	.14	.22	.22	.40	.75	1.10	1.45	1.81	2.16
19	.14	.23	.23	.42	.79	1.16	1.50	1.91	2.28
20	.15	.24	.24	.44	.83	1.22	1.61	2.01	2.40
21	.15	.25	.25						
22	.16	.26	.26						
23	.16	.27	.27						
24	.17	.28	.28						
25	.17	.29	.29						
26	.18	.30	.30						
27	.18	.31	.31						
28	.19	.32	.32						
29	.19	.33	.33						
30	.20	.34	.34						
31	.20	.35	.35						
32	.21	.36	.36						
33	.21	.37	.37						
34	.22	.38	.38						
35	.22	.39	.39						
36	.23	.40	.40						
37	.23	.41	.41						
38	.24	.42	.42						
39	.24	.43	.43						
40	.25	.44	.44						
41	.25	.45	.45						
42	.26	.46	.46						
43	.26	.47	.47						
44	.27	.48	.48						
45	.27	.49	.49						
46	.28	.50	.50						
47	.28	.51	.51						
48	.29	.52	.52						
49	.29	.53	.53						
50	.30	.54	.54						

NUMBER OF PLANTS OR TREES TO THE ACRE AT GIVEN DISTANCES.	
Distance Apart.	Number Plants.
12x12 inches.....	43,560
18x12 ".....	29,040
24x18 ".....	15,520
30x12 ".....	17,424
30x24 ".....	8,712
36x30 ".....	6,720
36x12 ".....	14,520
36x24 ".....	7,260
36x36 ".....	4,480
42x12 ".....	12,446
42x24 ".....	6,223
42x36 ".....	4,148
48x12 ".....	10,890
48x24 ".....	5,445
48x36 ".....	2,723
10x10 feet.....	435
12x12 ".....	307
16x16 ".....	120

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**IMPORTANT—READ THIS.** We supply with this Catalogue a return envelope, in which you may enclose your order and money, and mail by a registered letter. Money order, express money order, or bank draft need not be registered. Postage stamps taken the same as money in any amount.

Please note that prices of all seeds in small amounts include postage. Where seeds are ordered in larger quantities by express or freight, the purchaser pays transportation charges.

Since seeds have been admitted under parcel post, it is a great advantage to farmers residing many miles from a railroad, as seeds and other articles can be delivered to their door, thus saving a trip to town. Besides, the rates are very reasonable up to 400 or 500 miles. Should you wish to order large quantities of seeds by parcel post, write for special prices.

**MARLOW SEED CO.****WICHITA, KANS.**

On Account of the Uncertainty of Prices at the Time This Catalogue Goes to Press, Prices Quoted May Be Subject to Change.

# 1920 :: MARLOW'S SEED CATALOGUE :: 1920

## "MARCO" BRAND SEEDS GROW. THE GARDEN

A vegetable garden, no matter how small, is a **national and economic necessity**; the growing of vegetables is a vital necessity to-day, and will be until normal conditions and further sufficient time shall have elapsed to enable growers to plant sufficient crops to feed the nations as well as themselves. If one-third of the families in this country would produce one-half of the vegetables they consume during the year, both in fresh vegetables during the summer and fall months and produce canned for use during the winter, can anyone realize what a wonderful saving this would be? It is a possibility, and, if present conditions continue for a few years longer, it will be a probability, that someone will go hungry. **There are too many people that do not produce, but are waiting for the other fellow to produce for them, and it is up to the non-producer, or we will see even higher prices for items which we consume than we have had yet.**

How was your garden last season? Was it a success or not? If not, there is a reason for it. If you didn't have a garden last year, it is your duty to have one this year. If you will spend one or two hours each day, with proper instructions and a little patience, you can have a successful garden too. The question "Does it Pay?" has been asked time and time again. If you plant a garden early in the spring and harvest the first crop and let the garden grow up to weeds, it does not pay. In this soil and climate, two or three crops can be grown on the same piece of ground, and, if you will study succession of crops and follow them, your garden will pay, from a standpoint of dollars and cents, two or three times over. **Buy MARCO BRAND Seeds; they Grow.**

## OUR GUARANTEE

Any customer sending cash with order for Seeds has the privilege of returning them within fifteen days after receipt of same, if he is not satisfied with his purchase, and the money paid for same will be refunded.

This applies to Garden, Flower, or Farm Seeds.

**WHAT WE GUARANTEE:** That all money sent to us for Seeds shall reach us if sent by registered letter, postoffice express money order, or bank draft made payable to our order. That your order will be filled promptly and well. That goods ordered will reach you safely. Keep a copy of your order. Sometimes persons think they have ordered articles which they have omitted, and blame us for not sending them.

**HOW TO ORDER:**—In making out your order, write Name, Postoffice, County and State, and the varieties you want, quantities of each, and carry out the catalogue price after each one, enclosing total amount, in any convenient form of remittance, to us by mail. Use our Order Blank if you have it.

**MAIL OR EXPRESS:**—We send Seed postpaid by mail at the prices named in this Catalogue, except where there are special quotations for the goods to be sent by express, customers to pay the charges. To points where the Express Companies touch, we can send some orders as cheaply by express as by mail.

**EXPRESS OR FREIGHT:**—We do not prepay express or freight, except in case we have quite an order purchased at postpaid prices to deliver and may prefer to send by express, prepaid.

**TERMS AND C. O. D. SHIPMENTS.**—Our terms are strictly cash with the order. We must decline to ship goods C. O. D.

**ABOUT WARRANTIES.**—We thoroughly test all our Seeds and nothing is sent out which we do not believe to be good in every respect.

When it is considered how many are the contingencies on which the success of any crop depends, such as sowing too deep or too shallow, too wet or dry soil, unfavorable weather, insects, etc., our customers will readily see that it would be sheer folly for anyone to warrant Seeds to produce a perfect crop, and we want it plainly understood that, while we exercise great care to have all Seeds pure and reliable, and also true to name, we do not give any warranty, express or implied, as to description, quality, productiveness, or any other matter of any Seeds, Bulbs, or Plants we send out, and we will not be in any way responsible for the crop. If the purchaser does not accept the Seeds on these terms and conditions, they are to be returned at once, and the money that has been paid for same will be refunded. No officer, agent, or employee of this Company is authorized to make any warranty whatsoever. However, we have so much confidence in our Seeds that we hereby agree to refill any retail order for Vegetable or Flower Seeds free of charge should they prove otherwise than as we represent them. We know of no responsible Seed Firm in the world which guarantees Seeds any further than this. Compare with other Seed Catalogues and you will see that we are right.

**MARKET GARDENERS** and others who buy Vegetable Seeds in bulk to the amount of \$3.00 or more are requested to send their list of Seeds wanted to us and let us make special quotations.

**PLANT ORDERS.**—Orders for Plants will be filled as early in the spring as we consider it safe to send them. If ordered for immediate shipment in severe weather, they will be sent at purchaser's risk.

**HOW TO SEND MONEY.**—Either Postoffice Money Order, Express Money Order, Bank Draft, or Registered Letter. Small amounts will be accepted in postage stamps. Coin should be sewed or pasted in cloth or pasteboard, to prevent breaking through the envelope, and registered. Do not send money loose in a letter; it is not safe, and if lost, we are not responsible for it.

Remember, we pay the postage on all light Garden Seed. When ordering Beans, Peas, Sweet Corn, and Onion Sets in connection with the other Seeds, add one cent per pound for postage. When the heavier Seeds are ordered alone, add five cents for the first pound and one cent for each pound above that.

**WICHITA, KANSAS, Jan., 1920 MARLOW SEED COMPANY**

## Good Vegetables and Beautiful Flowers

**Good Soil** A rich, sandy loam is the best, but a fair degree of success may be secured from any soil which can be made rich and friable. Vegetables of the best quality can not be grown on barren sand, a cold, hard, lumpy clay, nor in the shade of orchard or other trees.

**Liberal Manuring** A soil which does not need enriching in order to produce the best results is rarely found and very often success is in proportion to the liberality with which fertilizers have been used. Well decomposed stable manure where straw bedding has been used is the best; manure where sawdust has been used for bedding is not so good. Often wood ashes at the rate of one peck up to one bushel to the square rod will be of great benefit.

When good stable manure is not available, commercial fertilizers may be used at the rate of four to twelve pounds to the square rod and the more concentrated forms, such as Nitrate of Soda, Guano, Dried Blood and Potash Sulphate, at the rate of one to six pounds to the rod, the larger amounts preferably in three or four applications and at intervals of about ten days. A mass or lump of any of the commercial fertilizers, even if it is but a quarter of an inch in diameter, is liable to kill any seed or young plant which comes in contact with it, so it is very important, if such fertilizers be used, that they be thoroughly pulverized and mixed with the soil.

**Thorough Preparation** Rich soil and liberal manuring will avail little without thorough preparation. The soil must be made friable by thorough and judicious working; if this is well done, all that follows will be easy; if it is neglected, only partial success is possible, and that at the cost of a great deal of hard work.

The garden should be well plowed or dug to a good depth, taking care, if it is in clay soil, that the work is not done when it is too wet. If a handul from the furrow moulds with slight pressure into a ball which can not be easily crumbled into fine earth again, the soil is too wet and if stirred then will be hard to work all summer. The surface should be made as fine and smooth as possible with the harrow or rake. It is generally desirable to plow the winter garden at once and to do this in time for the earliest crops, but the part which is not planted for some weeks should be kept mellow by frequent cultivation.

**Good Seed** There is no more prolific source of disappointment and failure among amateur gardeners than faulty, careless, or improperly planted seed. A seed consists of a minute plant enclosed in a hard and more or less impenetrable shell with a sufficient amount of food stored in or around the germ to sustain it until it can expand its leaves, form roots, and provide for itself. Moisture, heat, and a certain amount of air are necessary to secure germination. The germinating seed first absorbs water and swells. The starchy matters gradually become soluble. The seed-coats are ruptured, the rootlet emerges to go downward and the stemlet starts upward. The embryo lives for a time on the stored food, but gradually the plantlet secures a foothold in the soil and gathers food for itself. Germination is complete when the plantlet is able to shift for itself.

### A FEW REASONS WHY SOME GARDENS ARE NOT SUCCESSFUL.

- 1st. Failure, in preparing for the garden, to dig deeply enough and pulverize the soil sufficiently.
- 2d. Too thick planting in the row.
- 3d. Too deep planting, especially of small seeds.
- 4th. Ridging the garden and planting on ridges instead of keeping the ground level. Ridging causes the water to drain away from the plant.
- 5th. Planting too early, especially sweet corn, beans, cucumbers, and vine seeds.
- 6th. Too many light surface waterings; roots seek water and a wet surface causes a growth of roots towards the surface, which are later parched by the sun. Such watering tends also to form a hard crust over the surface. In general, there should be less watering and more hoeing. Keep a loose layer of soil on top to retain the water that is present. If you must water, soak things well and then leave the garden unwatered several days. Do not sprinkle lightly each day, as you do more harm than good.
- 7th. Do not attempt to raise potatoes in clay soil unless it has been well fertilized with barn-yard manure the previous fall and left to rot in the ground during the winter.
- 8th. Inability to kill the bugs and aphids or green lice which entered the gardens by the thousands during the past summer.

A dry seed may retain its vitality and remain unchanged for years, but after germination has commenced a check of a day or two in the process may be fatal. There is no time in the life of a plant when it is so susceptible to injury from the over-abundance or want of sufficient heat and moisture as at the period between the commencement of germination and the formation of the first true leaves. It is just then that the gardener should aid in securing favorable conditions. These are:

**FIRST**—A proper and constant degree of moisture. The soil should always be moist, never wet. To secure this, cover the seed as soon as it is planted with well-pulverized, freshly prepared earth, pressing it firmly over the seed. This firming of the soil is very important, as it brings the particles of earth into close contact with seeds and roots, prevents the drying out of the soil, and facilitates quick growth. The best results are obtained in small gardens by laying a board on the row and then walking upon the board, or the back of the hoe may be used, but for truck farms and field crops a roller is equally satisfactory.

**SECOND**—A proper degree of heat, secured by sowing the seed when the temperature of the soil is that most favorable to the germination of the seed of that particular plant. Too high a temperature is often as detrimental as one too low. The proper temperature for each sort may be learned from a careful study of the following pages and the experience of the most successful gardeners in our vicinity.

**THIRD**—Covering the seed to such a depth that while a uniform degree of heat and moisture is preserved, the necessary air can readily reach the germinating seed and the tiny stem push the forming leaves into the light and air. This depth will vary with different seeds and conditions of the soil and can be learned only from practical experience. In general, seed, of the size of the turnip should not be covered with more than half an inch of earth pressed down, while corn may be an inch, beans an inch to two inches, and peas one to three inches deep.

**FOURTH**—Such a condition of soil that the ascending stem can easily penetrate it and the young roots speedily find suitable food. We can usually secure this by thorough preparation of the ground and taking care never to sow fine seeds when the ground is wet. Occasionally a heavy or long continued rain followed by a bright sun will so bake and crust the surface that it is impossible for the young plant to find its way through it, or a few days of strong wind will so dry the surface that the young plants will be killed. In such cases the only remedy is to plant again.

**Judicious Cultivation** Not only should every weed be removed as soon as it appears, but the crust which forms after a rain should be broken up and the ground stirred as soon as it is dry enough to permit it. The more frequently and deeply the soil is stirred while the plants are young, the better; but as they develop and the roots occupy the ground, cultivation should be shallower until it becomes a mere stirring of the surface. The yield and quality of vegetables have often been decidedly lowered by injudiciously deep and close cultivation after the roots of the plants had fully occupied the ground. A very small garden, well cultivated and cared for, will give larger returns and be in every way more satisfactory than a much larger one poorly prepared and neglected.



## 1920 DESCRIPTIVE CATALOGUE 1920

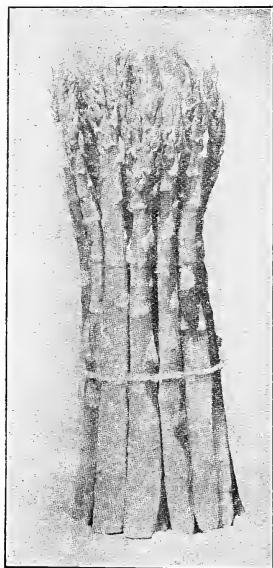
Vegetable Seeds, Garden and Field Seeds, Flower Seeds and Bulbs,  
Fruit Trees and Plants, Garden Tools, Insecticides, Sprays,  
Fertilizers, Poultry and Bee-Keepers' Supplies,  
Canaries, Etc., Etc.

## VEGETABLE and GARDEN SEEDS

### ASPARAGUS. BEANS.

If the rows be 6 feet apart, about 5,000 plants are required to plant an acre.

**Culture.**—Asparagus is one of the first vegetables in spring, as well as one of the best grown in the garden. It is perfectly hardy, grows year after year from the same roots, and never fails to produce a crop. Asparagus does well on any well-drained soil, but the best results are obtained from rich, deep, loamy soil. Asparagus is easily grown from seed. One ounce will plant about 50 feet of row and furnish about 400 plants. The seed should be planted as early in the spring as the weather becomes settled. Considerable crop may be expected the third year from seed, but it is best to buy two-year-old plants.



**Colossal Asparagus.**

**Conover's Colossal.**—A well-known standard variety, very large, strong shoots of excellent quality; not as clear white as Mammoth White, but preferred by many. Seed, price prepaid, per pkt., 5c; oz., 10c;  $\frac{1}{4}$  lb., 30c; lb., 90c; 5 lbs., \$3.75.

**Palmetto.**—A very early maturing and prolific variety, producing an abundance of very large, deep green shoots of the best quality. Seed, price prepaid, per pkg., 5c; oz., 10c;  $\frac{1}{4}$  lb., 30c; 1 lb., 90c; 5 lbs., \$3.75.

Our strong two-year-old roots will give the best results in the shortest time possible.

**Palmetto or Colossal.**—Two-year-old roots. Dozen, 50c; 100, \$1.75; 1,000, \$6.50, postpaid.

Mature for table 30 to 50 days from germination—according to variety. 2 bushels to the acre in drills. Order early.

**Culture.**—When all danger of spring frosts is over is the time to plant Beans. They thrive little when the soil, the days and nights are cold. Given moisture, this crop can be planted in succession until the middle of August. Sandy loam is the best soil, but they grow well in any soil of average richness. Bush varieties should be planted  $1\frac{1}{2}$  inches deep, in drills 18 inches or 2 feet apart, 2 inches apart in the drill. Pole varieties should be planted two or three beans in a hill, 3 feet apart each way. When plants are well up, thin gradually to 6 or 8 inches from each other, leaving the strongest plants as much as possible. Give them clean cultivation, mellowing the soil about them, but not going too deep, hilling broad and flat about the time they are to bear. Do not hoe when wet from dew or rain, as this induces rot of leaves or pods. A quart will plant 100 feet of drill; 2 bushels to the acre in drills.



**Improved Golden Wax.  
DWARF OR BUSH BEANS.**

#### Five Best Green-Podded Sorts.

**Provider.**—(31 days.) A prolific and continuous bearer. The first in spring, the last in fall. Absolutely stringless; very tender and of delicious flavor. This is a green-pod Bean and the pods are absolutely stringless, long, more or less curved, round deeply creased back, sharply constricted between seeds, dark green, extremely brittle, and totally without fiber. The plant is large and very erect when young, but becomes weighted down when fully developed. This Bean, because of its absolutely stringless, brittle, fiberless green pods, is one of the most popular varieties. Pkt., 10c;  $\frac{1}{4}$  lb., 15c; lb., 45c; 10 lbs., \$3.50, postpaid.

## BEANS—Dwarf or Bush—Continued.

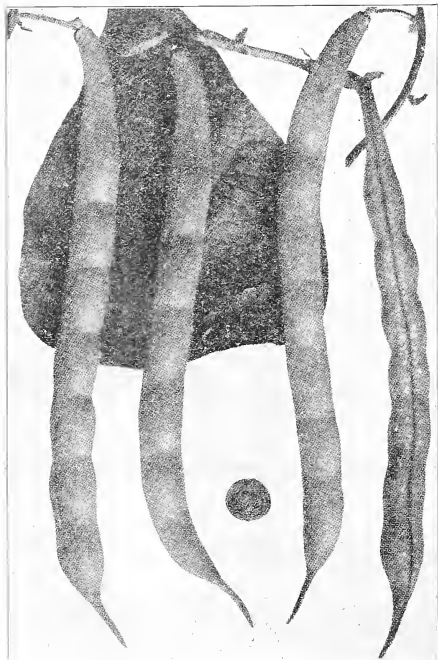
**Surpee's Stringless Green-Pod.**—(33 days.) The pods are absolutely stringless, full, fleshy, crisp, very tender, and of the finest flavor, remaining long in edible condition. Ready for the market 2 days earlier than Valentine, and very prolific. Too much can not be said in favor of this most excellent Bean, which has become a general favorite among growers. Pkt., 10c; lb., 40c; postpaid, 10 lbs., \$2.75.

**Extra Early Red Valentine.**—(35 days.) Best improved round-pod strain. One of the best strains of Valentine Beans ever offered. It matures quickly, and is of the best quality. Early, productive, tender, and desirable for family or market use. This strain has proven unequalled, and our customers who want the very best Valentine on the market should get this one. Pods, saddleback, 4 inches long; even when grown are brittle. Generally grown for early market. Pkt., 10c; lb., 40c; postpaid, 10 lbs., \$2.75.

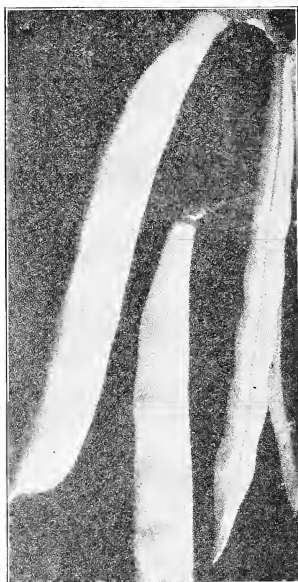
**Long Yellow Six Weeks.**—In many sections a popular market sort. When young, pods are of good quality. Very productive and hardy. Pods are long, straight, and quite thick. Pkt., 10c; lb., 40c; postpaid, 10 lbs., \$2.50.

**Black Valentine.**—A great improvement over the popular Red Valentine, the pods being perfectly round and straight, though not quite so early. It will withstand early and late frosts. Owing to its enormous yielding qualities and handsome appearance, it is a desirable sort for the market gardener. Pkt., 10c; lb., 40c; postpaid, 10 lbs., \$2.50.

**Giant Stringless Green Pod.**—Its round-podded, meaty bean resembles the Early Red Valentine, only they come in about a week or ten days later. The pods are of excellent quality, quite stringless and brittle at all stages. Highly recommended. Pkt., 10c; lb., 40c; postpaid, 10 lbs., \$3.00.



Stringless Green Pod.



Marlow's White Wax.

## SEVEN BEST YELLOW-PODDED SORTS.

**Improved Golden Wax.**—(32 days.) Very early pods are large, about 5 inches long, of a golden wax color, very tender and brittle. Pkt., 10c; lb., 40c; postpaid, 10 lbs., \$3.25.

**Prolific Black Wax.**—(33 days.) The pods are yellow, very tender, 4 to 5 inches long, transparent, and stringless. Pkt., 10c; lb., 40c; postpaid, 10 lbs., \$3.75.

**Wardell's Kidney Wax.**—(35 days.) This variety, maturing a little later than the Golden Wax, yields a large crop of long, nearly straight, broad, light golden yellow, handsome pods. These are of large size, about 6 inches long, and of good quality. They always command a ready sale, making the variety one of the most profitable for the market gardener. Suitable also for snaps for home garden use. The leaves are large and slightly roughened. Seed large, flattened, kidney-shaped, white, with dark markings about the eye. Pkt., 10c; lb., 50c; postpaid, 10 lbs., \$4.00.

**Marlow's White Wax.**—(40 days.) Very productive, bearing large handsome pods, straight, 6 inches long. Pkt., 10c; lb., 40c; postpaid, 10 lbs., \$3.50.

**The Earliest Wax Bean.**—The earliest Wax Bean in cultivation. Bears large clusters of luscious, stringless pods, full of meat. A real wonder. It is a distinct improvement in Golden Wax Bush Beans. Extremely early, being the first inspiring to yield edible pods. Pkt., 10c; lb., 40c; postpaid, 10 lbs., \$3.25.

**Currie's Rust-Proof Wax.**—Seed black; a very fine sort. Rust-proof, tender, thick-fleshed pods; early and very productive. Pkt., 10c; lb., 40c; postpaid, 10 lbs., \$3.25.

**Golden Eye Wax.**—Very productive; long, nearly straight; golden yellow pods; large size, fine quality; one of the best for market gardeners. Pkt., 10c; lb., 40c; postpaid, 10 lbs., \$3.50.

## PINTO BEAN.

**Mexican or Dry Land Hardy Bean.**

This is a drouth-resisting Bean and a remarkable producer; may be used either as a snap or string bean. We heartily recommend it. Pkt., 10c; lb., 30c; postpaid, 10 lbs., \$1.75.

## BEANS—Pole, Lima, and Field.

## POLE BEANS.

## Best Pole or Cornfield Beans.

**Kentucky Wonder.**—Also known as Old Homestead. We believe this variety is the most practically useful of the green-podded Pole Beans suitable for use as snaps. It is an early, very prolific sort, with showy pods of most excellent quality. The vines are vigorous, climbing well and very productive, bearing pods in large clusters. The pods are medium light green, very long, often reaching 9 or 10 inches, curved and twisted, nearly round and very crisp when young, becoming very irregular and spongy as the beans ripen. Seed long, oval, slightly flattened, dun-colored. One of the very best early pole snap beans for the home garden or market. The quality of our stock is unsurpassed. Pkt., 15c; lb., 40c; 2 lbs., 70c, postpaid; 100 lbs., \$30.00.

**King of the Garden Lima.**—An improvement on the large White Lima, producing a continuous bloom and fruitage to the end of the season. Pods are of enormous size. Pkt., 10c; lb., 40c; postpaid, 10 lbs., \$3.50.

**Speckled Wonder.**—Green-podded snap Pole Bean. A marvel of productiveness from July until frost. Large, thick, stringless pods, meaty, tender, and delicious; pods green, round, and long. Resembles the Kentucky Wonder, but has many superior qualities. It is larger and more prolific. Bears when scarcely higher than the average bush variety and produces continuously until frost. Pods are so fleshy that they are frequently greater in width than breadth. Absolutely stringless. Pkt., 10c; lb., 45c; postpaid, 10 lbs., \$3.75.

**Horticultural, or Speckled Cranberry.**—A showy Bean, maturing in eighty days. Pods green, dashed with red; valued either as a snap or for shelling. Pkt., 10c; lb., 45c; 10 lbs., postpaid, \$4.25.

**Lazy Wife's.**—This variety is the most popular Pole Bean grown. Pods are wonderfully broad and fleshy, and, above all, stringless. In many respects, they surpass anything we know of.

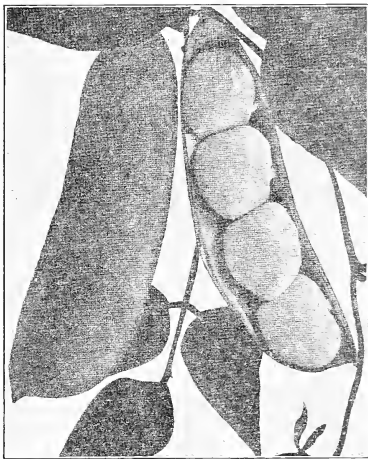
Then again, the pods retain their stringless and tender qualities until they are almost ripe; and we are perfectly safe in saying that they are the best of all Snap Shorts. Its name implies productiveness, for the vines being covered all summer with masses of beautiful pods, it is just the sort to suit lazy wives, as a mess can soon be picked for dinner. Pods which are green are rather flattish oval shape and when full grown are from 6 to 8 inches long, exceedingly rich, buttery, and finely flavored when cooked. They are hardy, easily grown and enormously productive. Pkt., 10c; 1 lb., 50c; 2 lbs., 90c, postpaid.

**Dutch Case Knife.**—The vines of this well-known green podded Kilney Bean for green shell use are of good climbing habit, but twining rather loosely and may be used for a corn hill sort of medium season. It is used for snaps when quite young. The leaves are large and crumpled. The pods are very long, 7 to 8 inches, flat, irregular, medium green, becoming lighter as they mature. Seed broad, kilney-shaped, flat, clear, white, and of excellent quality whether used green or dry. Pkt., 15c; lb., 45c; 2 lbs., 80c; postpaid; 100 lbs., \$28.00.

## BUSH LIMAS.

**Henderson's Bush Lima.**—(50 days.) Two weeks earlier than the Pole Lima. A bush strain of Sieva. Pkt., 10c; lb., 35c; postpaid, 10 lbs., \$2.75.

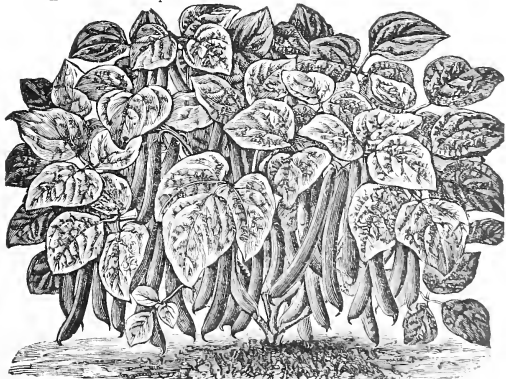
**Burpee's Bush Lima.**—A bush form of the true large Lima. Plants uniformly dwarf, bearing very abundantly; single plants, under favorable circumstances, yielding from 150 to 350 pods containing 4 to 6 beans; grows only 20 inches high, branching freely; immense bearer. Pkt., 10c; lb., 40c; postpaid, 10 lbs., \$3.50.



Bush Lima.

## FIELD BEANS.

**White Wonder, or Prolific Tree.**—The greatest Bean for arm crop that we have ever seen. Field Beans are a splendid crop, for there is always a ready market. The pods are large and filled with medium-sized beans. Extremely early, matures three weeks ahead of the Navy. Excellent material for cooking or baking. Habit dwarf, very bushy, and remarkably full of pods. It is the greatest yielder of all Field Beans and you will find our seed superior.

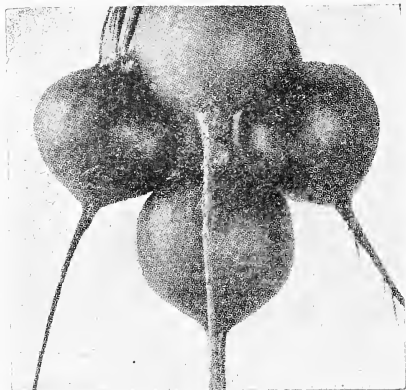


White Wonder.

## BEETS.

## GARDEN BEETS FOR TABLE USE.

**Culture.**—For earliest use and market, sow seed of any round sort under glass in February or March, and transplant to open ground in March or April. Seed for main crop may be sown as soon as ground can be put into proper condition. For table beets, sow in drills 14 inches apart, and thin to stand 3 to 4 inches apart in the rows. Use 1 ounce to 100 feet of drill, and cover lightly; 6 to 8 pounds per acre. The round and turnip-shaped beets are best for spring and summer, the half long kinds for winter. Make successional plantings and cultivate freely. Beet tops are much used for greens, and frequently form a profitable crop with many of our market-gardener customers.



Detroit Dark Red.

**Crosby's Egyptian.**—(42 days.) The earliest Beet on the market. A selection from that standard market Beet, Early Egyptian, which retains the earliness of the parent stock and has added thickness. It is the deepest red, almost black in color, and is of finer quality than the Egyptian, being sweeter and even more tender and smoother. The most desirable sort for small Beets for early market. It is a very rapid grower, and can be sown outside as late as July. Pkt., 10c; oz., 15c; ¼ lb., 45c; lb., \$1.25.

**Eclipse.**—(42 days.) A very early, smooth, dark, globe-shaped Beet, with small top; in earliness and quality it is excelled by none. A good cropper. We recommend it for market and garden use. Pkt., 5c; oz., 15c; ¼ lb., 45c; lb., \$1.25.

**Crimson Globe.**—(45 days.) Root of medium size, very handsome globe shape, and has a remarkably smooth surface. Both the skin and flesh are deep, rich red, fine-grained, sweet and tender in all stages of growth. Small tap root; leaves are small. Pkt., 15c; oz., 20c; ¼ lb., 50c; lb., \$1.50, postpaid.

**The Banquet.**—(40 days.) Dark red early turnip Beet. A perfect out-door forcing variety, preferable to all others for first sowing; may be sown in February or sooner, if the soil can be worked; being a rapid grower, may also be sown continuously as late as July. Handsome form, good size and above all, of very superior quality. Pkt., 15c; oz., 20c; ¼ lb., 60c; lb., \$2.00, postpaid.

**Detroit Dark Red (Turnip-shaped).**—(45 days.) Valuable because of its uniformity, medium in size, always smooth, and free from small roots. The flesh is tender, fine-grained, and remains so long after many sorts have become woody. Early or late. Pkt., 10c; oz., 20c; ¼ lb., 50c; lb., \$1.50, postpaid.

**Early Blood Turnip, Improved.**—(45 days.) One of the most popular early sorts. Smooth and dark red. Excellent quality. Pkt., 5c; oz., 15c; ¼ lb., 40c; lb., \$1.25, postpaid.

**Bastain's Half-Long.**—(50 days.) Best for winter use. Dark red flesh, sweet, tender, and never woody. Pkt., 5c; oz., 15c; ¼ lb., 40c; lb., \$1.50, postpaid.

**Long Smooth Blood.**—(65 days.) Sweet and tender; for fall and winter use. Pkt., 5c; oz., 15c; ¼ lb., 45c; lb., \$1.25.

**The Electric.**—The best second-early Beet. Thoroughbred, uniform in shape and size, with smooth, dark red skin, small leaves and a small tap root. The flesh is fine-grained and tender; color, rich red, ringed with dark crimson. An extra fine early table Beet. Pkt., 10c; oz., 15c; ¼ lb., 55c; lb., \$1.75.

## MANGEL AND SUGAR BEETS.

**Culture.**—Sow in the early spring as soon as ground can be gotten in proper condition, in drills 2 to 3 feet apart. Cover the seed with 1 inch of soil and thin to stand about 8 to 12 inches apart in the rows. Use 1 ounce to 100 feet of drill, 5 to 6 pounds per acre. A light loamy soil is best. Cultivate frequently. Keep free from weeds.

**Yellow or Orange Globe.**—(80 days.) Is remarkably smooth in shape. Flesh white, and a great keeper. Will stand a dry season exceedingly well, hence good for late planting. Pkt., 5c; oz., 10c; ¼ lb., 30c; lb., \$1.15; 5 lbs., \$5.00.

**Vilmorin's Improved Sugar.**—(85 days.) A variety originating in France. It differs from the Mangel Wurzel in containing the largest percentage of sugar of any known variety. In size it is medium, yielding from 10 to 16 tons per acre, containing about 18 per cent sugar. Should be grown in deep soil. Pkt., 10c; oz., 15c; ¼ lb., 35c; lb., \$1.15; 5 lbs., \$5.00, prepaid.

**Mammoth Golden Giant.**—(85 days.) An improvement on the Long Yellow Mangel, being of greater size, more than half above ground, and of a russet yellow color. Remarkably even in shape, rather elongated, of vigorous growth. Fine neck and a very smooth skin. Flesh white, firm, and sweet, much liked by cattle. A magnificent root, easily lifted from the ground, producing enormous crops, 40 to 60 tons per acre. Pkt., 5c; oz., 10c; ¼ lb., 25c; lb., \$1.00; 5 lbs., \$4.25, prepaid.

**Mammoth Long Red.**—(82 days.) Enormously productive. Yields from 50 to 75 tons per acre. The roots grow well above ground and are easily dug. Pkt., 5c; oz., 10c; ¼ lb., 25c; lb., 90c; 5 lbs., \$4.25, prepaid.

**Golden Tankard.**—(80 days.) The best yellow Mangel in cultivation. A distinct and valuable yellow-fleshed variety, which contains a larger percentage of sugar and nutritive matter than any of the red-skinned sorts. Relished by milch cows and sheep. Almost cylindrical. Exceedingly hardy. Pkt., 5c; oz., 10c; ¼ lb., 25c; lb., \$1.00; 5 lbs., \$4.25, prepaid.

**Red Globe.**—(85 days.) A large, globular, red sort; a better keeper than the Long Red. Produces fine crops on shallow soil; its fine grain and excellent keeping qualities render it most desirable. Pkt., 5c; oz., 10c; ¼ lb., 25c; lb., \$1.00; 5 lbs., \$4.25, prepaid.

**Klein Wanzleben Sugar.**—Planted for its sugar-producing qualities. Eighteen tons of sugar have been made from 100 tons of these beets. Recommended as a winter food for milch cows. Pkt., 10c; oz., 15c; ¼ lb., 35c; lb., \$1.25; 5 lbs., \$4.75, postpaid.



Early Blood Turnip Beet.

## SWISS CHARD, OR SEA KALE BEET

Sometimes called Spinach Beet. Used for greens for chickens by cutting the stem and leaf, which are also very ornamental. It resembles an ornamental Beet top, but has no edible root. May be used as a salad. Pkt., 10c; oz., 20c; ¼ lb., 60c.

## CABBAGE.

## Gardeners Can Rely Upon Marlow's Cabbage Seed.

Sow 1 ounce for 3,000 to 4,000 plants; 4 ounces for 1 acre.

**Culture.**—For plants of the earlier sorts, sow seed in January or February under glass and set out in flats or frames about 2 inches apart each way. Transplant to open ground as soon in spring as the land can be properly prepared. A rich, warm fibrous loam is best. Have the plants in the rows 20 to 24 inches apart and the rows at least 2 feet apart. Give thorough cultivation and irrigate in dry weather if practicable. Protect against the ravages of cutworm, maggot, and green worm, dusting with tobacco dust, insect powder, etc.

**Joffre Cabbage.**—(65 days.) Extreme size, earliness, handsome color, solidity, tender fibre, fine flavor; superior for cooking for kraut, or for profitable market. Pkt., 15c; oz., 85c; ¼ lb., \$3.00, postpaid.

**Extra Early Jersey Wakefield.**—(70 days.) Select stock. Long recognized as the best very early marketable Cabbage. Medium in size; in shape, pyramidal, with a pointed peak. Is a reliable, certain header, and one of the most profitable Cabbages for the market gardener. Our strain of seed is of superior quality. Pkt., 10c; oz., 45c; ¼ lb., \$1.50, postpaid.

**Early Flat Dutch.**—(75 days.) A good second-early and sure header. Tender and fine-grained. Pkt. 10c; oz., 45c; ¼ lb., \$1.50, postpaid.



Charleston, or Large Wakefield.

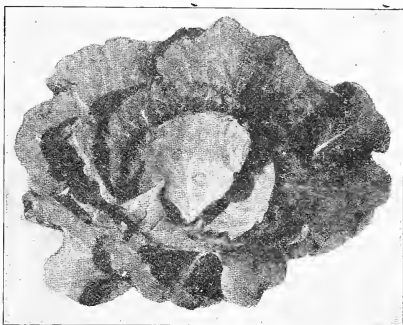
**Early Summer.**—Second early, somewhat flattened Cabbage, valuable for the home garden and takes well on the market. It is also well adapted for kraut. The plants are vigorous and strong-growing, but compact, with numerous, but not large, rather spreading outer leaves which are somewhat frilled and are sometimes called rather thin and slightly undulating. The stem is rather short. The heads are of medium size, round, somewhat flattened, and keep longer without bursting than most early sorts. Pkt., 10c; 2 for 15c; oz., 45c; ¼ lb., \$1.50, postpaid.

**Early Winningstadt.**—(75 days.) An excellent variety. Heads hard, conical in shape, and a good keeper. Pkt., 10c; oz., 45c; ¼ lb., \$1.50, postpaid.

**All Seasons.**—(80 days.) Large heads; very desirable for early spring, summer, or fall use; good keeper. Pkt. 10c; oz., 45c; ¼ lb., \$1.50, postpaid.

**Sure Head.**—(85 days.) Properly named, as it never fails to make a fine, solid, large head. Pkt., 10c; oz., 45c; ¼ lb., \$1.50, postpaid.

**Improved Late Flat Dutch.**—In this superior strain of late Cabbage we believe we have combined every good quality essential to perfection. It is the result of several years' continued selection of seed stocks of the most perfect and largest heads, with low stalks, and especially those that show greater earliness in heading, with few outer leaves and a very uniform color. By such persistent selection, we have a highly improved strain. Market gardeners grow it in preference to all others for a main crop. It is most uniform in shape, size, and color. Pkt., 10c; oz., 45c; ¼ lb., \$1.50, postpaid.



Early Flat Dutch.

**American Drumhead Savoy (Wirsing).**—The leading variety of all Savoy. Valuable for the private garden. Sweeter than other Cabbages, especially when touched by a slight frost. Pkt., 10c; oz., 45c; ¼ lb., \$1.50, postpaid.

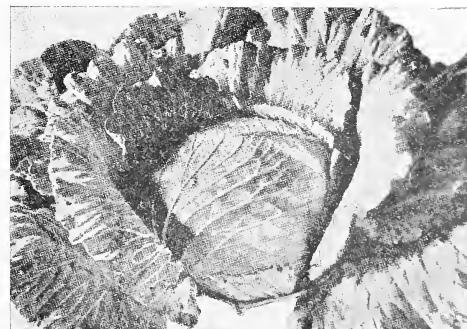
**Red Drumhead (Improved Large Red Dutch).**—The well-known standard. Heads of large size, slightly rounded, 7 to 8 inches in diameter. Pkt., 10c; oz., 45c; ¼ lb., \$1.50, postpaid.

**Copenhagen Market.**—(60 days.) The earliest large round-headed Cabbage. It is an extra-early variety, maturing at the same time as Jersey Wakefield, but produces much larger heads than any other Cabbage equally as early. The heads average about 10 pounds in weight, are ball-shaped, solid, and firm, with a small core, and of fine texture and quality. The seeds mature all at the same time, so the entire crop may be harvested at one time. The leaves are light green, tightly folded together, permitting close planting, and has a short stem, growing close to the ground. Our stock is grown by the originator in Denmark and is the earliest of our Danish Cabbages, recommended for the private garden, as well as to growers for the market. Pkt., 25c; oz., \$1.25; ¼ lb., \$4.20, postpaid.

**Large Late Drumhead.**—Enormous heads, hardy, and especially desirable for winter. Fine shipper. Pkt., 10c; oz., 45c; ¼ lb., \$1.50, postpaid.

**Danish Ballhead.**—One of the best winter sorts. Heads round and solid. Pkt., 10c; oz., 45c; ¼ lb., \$1.50, postpaid.

**Louisville Drumhead.**—Popular with kraut-makers. Medium late. Forms large, solid heads, and seldom bursts. Pkt., 10c; oz., 45c; ¼ lb., \$1.50, postpaid.



Late Flat Dutch.

## CARROT.

**Culture.**—The Carrot will do well in any good, well-worked soil. For early use, sow the seed when the apple is in bloom in rows 15 inches apart, and when 2 inches high thin out so that the plants stand out 4 inches apart in the row. For fall and winter use, sow the seed from the 1st to the 15th of June. The roots may be stored in cellar or pit covered with dry sand, where they will keep fresh and solid until late in spring. Sow 1 ounce of seed to 100 feet of drill 2 to 3 pounds to the acre.

## TABLE USE.

**Oxheart, or Guerande.**—(48 days.) The French Carrot is one of the most valuable varieties, either for family use or for the market. It is an intermediate between the Half-long and the Horn type, attaining a diameter of 3 to 4 inches at the neck. It is very productive, of a rich orange color, and beautiful shape. Pkt., 5c; oz., 20c;  $\frac{1}{4}$  lb., 50c; lb., \$1.50, postpaid.

**Chantenay.**—(52 days.) A nice smooth Carrot of perfect and uniform shape. A heavy yielder, a fine table quality, 5 to 6 inches long, and easily dug. The flesh is of a deep yellow color, tender, and of excellent flavor. Pkt., 5c; oz., 20c;  $\frac{1}{4}$  lb., 50c; lb., \$1.25, postpaid.

**Early Scarlet Horn.**—One of the most popular varieties grown; color, deep orange; one of the best for table use. Pkt., 5c; oz., 15c;  $\frac{1}{4}$  lb., 50c, postpaid.

**Early French Forcing.**—The earliest variety, largely grown for forcing purposes; globular shaped root, of an orange red color. Pkt., 5c; oz., 15c, postpaid.

**Danvers Half-Long.**—(50 days.) Admirable in color—a wonderful producer; the best of all for the stock-breeder and valuable to the market gardener. With this variety the planters secure the largest return to the acre, with the least difficulty of harvesting. Pkt., 5c; oz., 20c;  $\frac{1}{4}$  lb., 50c; lb., \$1.25, postpaid.

## STOCK-FEEDING.

**Improved Long Orange.**—(75 days.) The old standby for both stock-feeding and table use, either summer or winter. Fed to milch cows, it increases the flow of rich milk and gives to the butter a fine flavor and a beautiful golden color. Pkt., 5c; oz., 20c;  $\frac{1}{4}$  lb., 45c; lb., \$1.25, postpaid.

**Large White Belgian.**—(75 days.) Grows one-third out of the ground. Root pure white, green above the ground, and has a small top. It will grow to a very large size on rich soil, easily gathered. Flesh rather coarse. Used exclusively for stock-feeding purposes. Pkt., 5c; oz., 20c;  $\frac{1}{4}$  lb., 60c; lb., \$1.75, postpaid.



Danvers.



Chantenay.

## CAULIFLOWER.

**Culture.**—A vegetable requiring very rich soil and plenty of moisture and careful attention. Not as hardy as Cabbage in resistance to hot, dry, or cold weather. Sow in hot-beds in January or February and when plants are large enough, transplant. Set plants out 15 to 18 inches apart and rows 2 feet apart. When the heads begin to form, tie up the outer leaves to protect the head from sun and weather. One ounce will produce 2,000 plants.



**Early Snowball.**—Under favorable conditions, every plant produces a white head of fine quality. Pkt., 25c; oz., \$3.00.

**Extra Select Dwarf Early Erfurt.**—The best in general cultivation for forcing and open ground. Head close, compact, and large, measuring from 7 to 10 inches in diameter. Plants are quite dwarf, and seldom fail to form a good-sized symmetrical head of flower. Pkt., 25c; oz., \$3.00.

## CRESS, OR PEPPER GRASS.

**Culture.**—A refreshing salad of easiest culture. As soon as the ground can be worked in the spring sow thickly, broadcast, or in rows 8 inches apart. Repeated sowings may be made every two weeks for a succession.

**Dwarf Fine Curled.**—A small, pungent salad of easiest culture. Seed should be sown early in rows about 15 inches apart and covered lightly; when 2 or 3 inches high it is ready for use. It is often mixed with lettuce, and imparts a warm, agreeable taste to the salad. Pkt., 10c; oz., 35c.

**True Water Cress.**—Succeeds only where the roots and stems are submerged in water. A highly prized salad of a pleasant and agreeable flavor. Should be planted wherever a suitable place can be found for it. Pkt., 10c; oz., 40c.

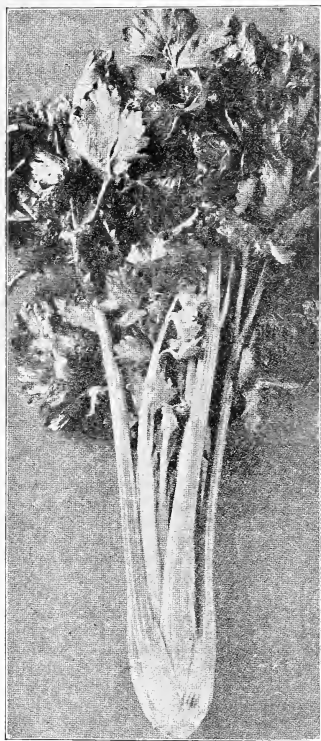
## COLLARDS.

This is a tall, loose-leaved cabbage-like or kale-like plant, known in different sections as "Cole," "Colewort," or simply "Greens." It is extensively used for the table, as well as for stock-feeding.

Sow the seed thickly in drills, in rich ground, transplanting when about 4 inches high; or sow in drills where the plants are to remain and when well started thin to 2 or 3 feet apart in the row.

**Georgia, Southern, or Crole.**—This is the white or green-stemmed variety, growing 2 to 3 feet high and forming a large, loose, open head or cluster of leaves with a rather long stem. A frost, if not too severe, will improve rather than injure the quality of the leaves. Pkt., 10c; oz., 15c; 2 ozs., 25c;  $\frac{1}{4}$  lb., 40c; lb., \$1.50.

## CELERY.



Golden Yellow Self-Blanching.

**Culture.**—Celery seed is slow to germinate and ample time must be given. Sow thin; cover lightly. Keep constantly moist. Count on about 7,500 plants per ounce of seed, or  $\frac{1}{4}$  pound per acre. When the seedling plants are 3 inches high, they should be clipped at the top to favor stocky growth, or else transplanted. Celery is mostly grown under flat culture, without trenches, in rows 3 to 5 feet apart. For home use Celery is often grown in double rows, 10 inches apart, without trenching, and banked for winter storage just where it grows, without lifting.

**Giant Pascal.**—Grows about 2 feet high. The stalks are very broad, thick, and crisp, and of a rich nutty flavor. The heart is golden yellow, very full and attractive in appearance. It bleaches very easily and quickly. Pkt., 10c; oz., 30c;  $\frac{1}{4}$  lb., 85c.

**Golden Self-Blanching.**—(100 days.) This is a beautiful plant, of close habit, compact growth, and has straight and vigorous stalks. The ribs are perfectly solid, crisp, and brittle. Its delicate flavor is surpassed by no other variety, and, moreover, it has the decided merit of being self-blanching to a very remarkable degree. Pkt., 10c; oz., 60c;  $\frac{1}{4}$  lb., \$2.25, postpaid.

**White Plume.**—(110 days.) This Celery is valued because the stalks and portions of the inner leaves and heart are

white. By simply tying up the stalks and drawing up the soil with the hoe, the work of blanching is completed. It is ornamental, tender, crisp, of good flavor, and very early. Pkt., 10c oz., 40c;  $\frac{1}{4}$  lb., \$1.25, postpaid.

CELERIAC,  
Or Turnip-Rooted Celery.

**Culture.**—In this kind of Celery the roots have been developed by cultivation, and not the leaf-stalks. The roots, which are the edible portion keep well for winter use and are excellent for soups and stews. They are also cooked and sliced as a salad.

Sow seed at the same season and give the same treatment as common Celery. Transplant to moist, rich soil, in rows 2 feet apart and 6 inches apart in row. Give thorough culture. It is not necessary to earth up or "handle" the plants. After the roots have attained a diameter of 2 inches, they are fit for use.

To keep through the winter, pack in damp earth or sand and put in the cellar or leave out of doors, covering with earth and straw like beets and carrots.

**Large Smooth Prague.**—An improved variety of turnip-rooted Celery, producing large roots of nearly globular shape and comparatively smooth surface. Pkt., 10c, 2 for 15c; oz., 30c; 2 ozs., 55c;  $\frac{1}{4}$  lb., 90c; lb., \$3.00.

Large Smooth  
Prague.

## CHICORY.

**Large-Rooted, or Coffee.**—The dried and prepared roots are much used as a substitute for coffee, and the young leaves may be used as a spring salad. Our stock is the improved type, with very much larger, smoother, whiter, and proportionately shorter roots than the old kind.

Sow seed as early in spring as the ground can be prepared, in rather light, moderately rich soil, in drills 2 to 2½ feet apart for either garden or field culture. When the plants are sufficiently large, thin to 6 inches apart in the row and cultivate well.

## CHIVES.

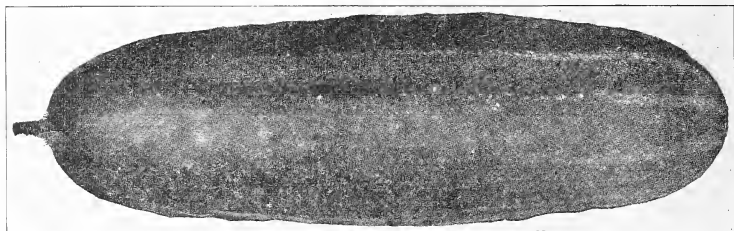
**Allium Schœnoprassum.**—An onion-like plant used as a salad and for flavoring soups. It also makes an excellent ornamental garden bed edging which may frequently be cut, a new growth of leaves appearing soon after each cutting. The plants grow about 10 inches high. One sowing will answer for about three years.

## CORN SALAD.

For winter use, sow shallow in rows 1 foot apart during August or September. The plants are ready for use in six or eight weeks. When winter approaches, give them a very light covering of hay or straw. The plants are hardy and will remain green and fit for use all winter. The seed may also be sown early in spring. Pkt., 10c; oz., 40c.



## CUCUMBERS.



Improved Long Green.

**Culture.**—Flourish best in a rich, warm, sandy loam. Sow when danger of frost is over, in hills 4 or 5 feet each way. As the young plants have many enemies, sow thickly,  $\frac{1}{2}$ -inch deep, and then thin out finally to three or four plants to the hill. Use 1 ounce of seed to 75 hills; 2 to 3 pounds to the acre. Gather cucumbers by cutting, not tearing. Leave none to ripen if you want a full crop. For early use, plant in hills 4x4 feet, on a warmer border, when the Cherry is in bloom; and for a succession, sow in drills at 5 feet, when the Apple is in bloom. For pickles, plant in the middle of summer.

**Davis' Perfect.**—(70 days.) It is an early, prolific, and continuous producer of large and symmetrical fruits of a rich deep green color, shading perfectly to the ends, practically no misshapen fruits or culls. Ideal for slicing—fresh, sparkling white, and refreshing. A delightful plate on the table, and the flavor is new. Vines are vigorous, mildew-proof, and maintain their bearing from earliest to latest season. This variety is best for either home or market gardeners. Pkt., 10c; oz., 20c;  $\frac{1}{4}$  lb., 40c; lb., \$1.25, postpaid.

**Evergreen, or Extra Long White Spine.**—(60 days.) One of the best table sorts. A fine strain, producing smooth, regular fruits, frequently 12 inches long; smooth, round, handsomely colored and very regular in size and form; of excellent quality. Pkt., 10c; oz., 15c;  $\frac{1}{4}$  lb., 45c; lb., \$1.50.

**Improved Long Green.**—(82 days.) Unquestionably this is the most popular general-purpose Cucumber. When matured, is 9 to 12 inches long, very solid and crisp; retains its dark green color until nearly ripe. One of the best for small pickling, if pickled properly. Pkt., 5c; oz., 20c;  $\frac{1}{4}$  lb., 40c; lb., \$1.25.

**Early Frame, or Short Green.**—(52 days.) An excellent sort for table use and for pickling. Fruit straight, handsome, smaller at each end; bright green; flesh tender and crisp, makes fine pickles. Pkt., 5c; oz., 15c;  $\frac{1}{4}$  lb., 35c; lb., \$1.25.

**Extra Early Green Prolific Pickling.**—(54 days.) One of the best for pickling. Dark green, and of uniform size; very few seeds. Pkt., 5c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.50, postpaid.

**Japanese Climbing.**—(60 days.) Can be trained upon a trellis or poles, which will insure earlier ripening and a straight, handsome form in the large fruits. It endures summer heat and drought exceedingly well. It is entirely distinct. Quality splendid. It is adapted for pickling, as well as for slicing for salads. The cucumbers are 12 inches in length. Skin smooth, dark green, turning to brown, and pitted with ribs. The flesh is pure white, crisp, and of mild flavor. Pkt., 10c; oz., 20c;  $\frac{1}{4}$  lb., 45c; lb., \$1.50, postpaid.

**Boston or Jersey Pickling.**—(55 days.) A favorite Eastern sort of fine quality, medium length; reliable for pickling and slicing. Pkt., 10c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.25, postpaid.

**Early Green Cluster.**—(52 days.) Short and prickly; bearing in clusters; prolific; fine for bottling. Pkt., 5c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.15, postpaid.

**Early White Spine.**—One of the best sorts for table use. The vines are vigorous, fruiting early and abundantly. The fruits are uniformly straight, dark green, fairly well covered with white spines, and when mature are usually about 7 inches in

length. The flesh is crisp, tender, and of excellent quality. The variety is much used for the home garden and market. Pkt., 10c, 2 for 15c; oz., 15c; 2 ozs., 25c;  $\frac{1}{4}$  lb., 40c; lb., \$1.50 postpaid.

**Arlington.**—A medium early, white-spined Cucumber, more slender than Early White Spine and pointed at each end. The young fruits are crisp and tender. The mature fruits are bright deep green and are about 7 inches in length, sometimes longer. This variety is extensively used for the home garden and for bulk pickles. Pkt., 10c, 2 for 15c; oz., 15c; 2 ozs., 25c;  $\frac{1}{4}$  lb., 40c; lb., \$1.50, postpaid.

**Klondike.**—A medium early, white-spined Cucumber of handsome, very dark green color and of excellent quality for slicing. The vines are very hardy and productive. The mature fruits when grown under favorable conditions are often about 8 inches in length, and are uniform in size and shape. The color is very dark green, slightly striped at the ends. The dark green color is retained much longer and is affected less by the hot sun than any other sort with which we are familiar. Its uniform size and shape and splendid color are making this variety very popular as a shipping sort. Pkt., 10c, 2 for 15c; oz., 15c; 2 ozs., 25c;  $\frac{1}{4}$  lb., 40c; lb., \$1.50, postpaid.

**New Cumberland.**—A variety of the Early White Spine type. From the time they first set on until full grown, the form is exceptionally straight and symmetrical, making them as choice for a slicing variety as for pickles. The flesh is firm, very crisp and tender at all stages. Pkt., 5c; oz., 10c;  $\frac{1}{4}$  lb., 30c, postpaid.

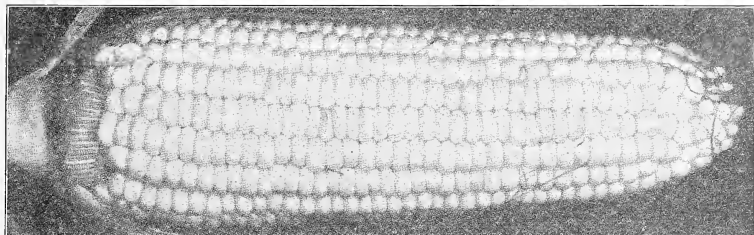


Evergreen.



## CORN.

Sweet or Table Varieties.



Stowell's Evergreen Sugar.

**Culture.**—Sweet Corn always does well on sod land, or where clover has been turned down. Plant when danger of frost is over in hills 2½ feet, according to variety. Give frequent and continued shallow culture. Leave two or three stalks to the hill, and make successional plantings until nearly mid-summer. Use 1 quart for 600 hills; 6 to 8 quarts per acre. Cover seed with 3 inches of soil.

## NINE EXTRA EARLY VARIETIES.

**Extra Early Crosby Sugar.**—(65 days.) This variety will produce edible ears in sixty days from germination. It is of larger growth than any of the preceding. Fine sort. A standard. Pkt., 10c; lb., 35c; 10 lbs., \$3.00.

**Golden Bantam.**—(70 days.) Dwarf, 4½ feet high. So very hardy that it can be planted earlier in the spring and in colder and damper soil than other varieties of table Corn. Exceedingly sweet, very productive, consequently a great favorite. When ready for table use, it is a creamy yellow. Growing in great demand. Pkt., 10c; lb., 35c; 10 lbs., \$3.00.

**White Mexican.**—An early Sweet Corn of very rich and excellent flavor. Stalks about 4½ feet high; ears 8 inches long, usually eight-rowed; about the same season as Crosby's Early and of better quality than any other early variety of equally size. Our stock is far superior to much that has been sold under this name. Pkt., 10c; lb., 40c; 10 lbs., \$3.00.

**Extra Early Minnesota Sugar.**—(60 days.) Among the extra early Sugar Corns, coming into condition two or three days subsequent to the Corey. Ears well made out. Pkt., 10c; lb., 35c; 10 lbs., \$3.25.

**Early Evergreen.**—Like Stowell's Evergreen, only ten days earlier. Ears large, about 18 inches long, 12 to 16-rowed, and saving the identical flavor of the famous Stowell's Evergreen. It remains green a remarkably long time, and the kernels retain the sweetness and tenderness which is so characteristic of Stowell's. Pkt., 10c; lb., 35c; 10 lbs., \$3.00.

**White Corey.**—(62 days.) Stalks 4 to 4½ feet high. A valuable sort; quite robust for a short-stalked and exceptionally early sort. Ears of good length—that is, 6 to 7 inches; grains large, sweet, and tender. Pkt., 10c; lb., 40c; 10 lbs., \$3.25.

**Extra Early Adams, or Early Burlington.**—(62 days.) Height of stalk, 4 feet; ears set within 6 inches of the ground. Not a Sugar Corn, but a decided acquisition so very early in the

season. Plant close in rows at 2½ feet and thin to 1 foot. Pkt., 5c; lb., 25c; 10 lbs., \$2.00.

**Adams' Early.**—(68 days.) In order of maturity after the Extra Early Adams. Pkt., 5c; lb., 25c; 10 lbs., \$1.75.

**Country Gentleman.**—(70 days.) A short-stalked productive sort, frequently producing three ears to the plant, Ears large for so small a stalk; grain narrow and very deep, after the form of a shoepeg. Highly recommended as one of the very best. Pkt., 10c; lb., 40c; 10 lbs., \$3.75.

## LATE VARIETIES.

**Evergreen Sugar (Stowell's).**—(80 days.) The most popular among the late Sugar Corns. More bushels are used than all other sorts combined. Large, tender, very deep, milk-white grains. Pkt., 10c; lb., 35c; 10 lbs., \$2.75.

**Late Mammoth Sugar.**—This is the latest and largest of all the Sugar Corns. The ears are immense, and of finer quality and flavor. Pkt., 10c; lb., 35c; 10 lbs., \$2.75.

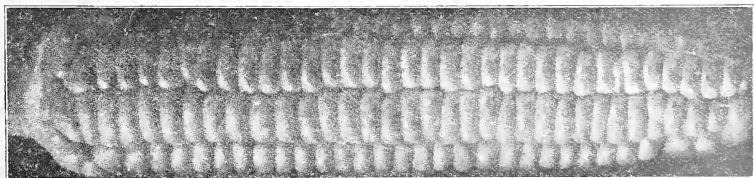
## POP CORN.

Pop Corn should be found in every garden and on every farm, especially if there are children in the home to enjoy it during the long winter evenings. The constant demand for Pop Corn makes it a profitable crop. Let the boys raise an acre of it for their own spending-money. Be sure to procure good pure seed for them, as Pop Corn mixes readily with field varieties.

**Queen's Golden.**—The largest Pop Corn. The stalks grow 5 to 6 feet high and bear two to three large ears each. It is yellow, but pops perfectly white. Lb., 20c; 10 lbs., \$1.50.

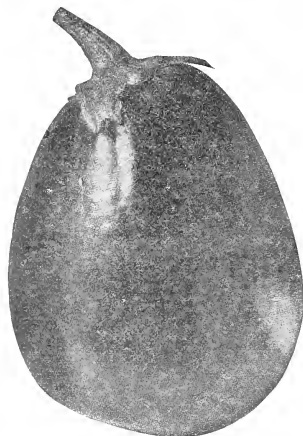
**White Rice.**—A very handsome and popular variety. Ears short, kernels long, pointed, and resemble rice; color, white. Lb., 20c; 10 lbs., \$1.50.

**Mapledale Prolific.**—Ears uniformly large; kernels nearly clear white and smooth. Pops large and tender. Lb., 20c; 10 lbs., \$1.50.



Golden Bantam.

## EGG PLANT.



New York Improved Purple.

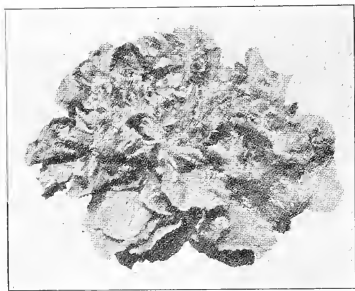
**New York Improved Purple.**—One of the best and largest varieties in cultivation. Our strain of this variety is especially fine. The plant is robust, low-growing, branching freely, and bears long, oblong-shaped fruits. We think this variety better than any other. Pkt., 10c; oz., 60c;  $\frac{1}{4}$  lb., \$2.00, postpaid.

**Black Beauty.**—Ten days or two weeks earlier than the preceding, with fruits just as large, uniform and rich, lustrous black color. Fruit develops very quickly, and planters will be pleased with it. Pkt., 10c; oz., 60c;  $\frac{1}{4}$  lb., \$2.00, postpaid.

## ENDIVE.

2 ounces of seed to 100 yards of row; 3 pounds to the acre.

**Culture.**—Sow in the spring as soon as the earth is free from frost, and repeat to within sixty days of autumn frost. Drill in rows 2 feet and thin the plants to 8 inches apart. Tie up the loose leaves or cover with pots to bleach for salad. Valuable for salads and highly decorative as a garnish.



Broad-Leaved Batavian Endive.

**Improved Green Curled.**—Finely fringed leaves of bright green color; tender and crisp when properly blanched. Pkg., 5c; oz., 20c;  $\frac{1}{4}$  lb., 65c, postpaid.

**White Curled.**—The thick center leaves are naturally a pale yellow color, while the finely cut and curled outside leaves are pure white. It does not need blanching, is of large size, and is always tender and crisp. Pkg., 10c; oz., 20c;  $\frac{1}{4}$  lb., 65c, postpaid.

## GARLIC.

Used for flavoring soups, sausages, etc. It is propagated by division of the roots into small parts. The bulbs are gathered in August in the same manner as onions.  $\frac{1}{2}$  lb., 30c; lb., 55c, postpaid.

## HERBS—Sweet, Medicinal, and Pot.

	Pkt.	Oz.	$\frac{1}{4}$ Lb.
Anise	10c	20c	\$0.40
Caraway	10c	20c	.35
Coriander	10c	20c	.40
Dill	10c	20c	.40
Lavender	10c	25c	.50
Marjoram, Sweet	15c	30c	.50
Sage	15c	30c	.50
Summer Savory	15c	40c	.75
Thyme	15c	50c	1.00

## KOHL RABI.

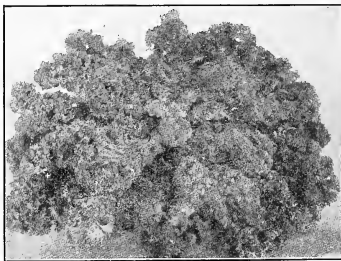
The edible part is the turnip-shaped bulb formed above ground. It is tender and excellent when used before fully grown, combining somewhat the flavors of cabbage and turnip.

**Culture.**—Seed should be sown in light, rich soil, as early in spring as possible, in rows  $1\frac{1}{2}$  feet apart, and when well established thin to 6 inches apart in the row. Plantings at intervals of ten days will give a succession until hot weather, when they fail to grow well. Plantings may be made the latter part of July for fall use.

**Early White Vienna.**—Extra fine for forcing. This variety is extremely early, with distinctly small tops. The bulbs are of medium size, very light green or nearly white; best quality for table when about 2 inches in diameter. Pkt., 10c; oz., 25c;  $\frac{1}{4}$  lb., \$1.00.

## KALE, OR BORECOLE.

**Culture.**—Used largely for greens in fall, winter, and spring. Can be sown broadcast or in drills 18 inches apart from early September to the middle of October; can also be sown in February and March, at which time the Spring or Smooth Kale is best to use. This is also used in the fall, as it makes greens quicker than other varieties. All should be protected with straw or coarse litter in winter, so that the plants can be cut throughout the season. Winter varieties can be sown at the rate of 3 to 4 pounds to the acre; can be sown broadcast at the rate of 8 pounds per acre, or 4 or 5 pounds in drills.



Dwarf German Greens.

**Dwarf Green Curled Scotch.**—Grows about 12 inches in height and spreads, under good cultivation, to 3 feet in diameter. The leaves are bright green, beautifully curled, and very tender. Allow to get a slight touch of frost before using. Pkt., 10c; oz., 25c;  $\frac{1}{4}$  lb., 85c.

## LEEK.

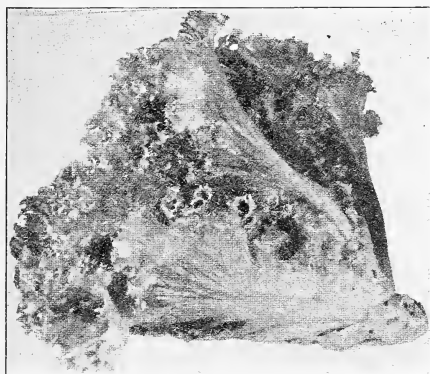
**Culture.**—Similar to onions in flavor, being of the same family of plants, but do not form a thick bulb. Sow seed as early as possible,  $\frac{1}{2}$  inch deep, and when plants are large enough to handle transplant to rows 12 inches apart, setting plants 6 inches apart. Hill up as they grow to bleach the stems, or plant in a trench like Celery and fill in as they grow. Seed may also be sown in September and transplanted in spring. One ounce will sow 100 feet of drill.

**American Flag.**—Sow early in the spring in drills 1 inch deep and 1 foot apart. When 6 or 8 inches high, transplant in rows 12 inches apart and 5 inches between the plants as deep as possible that the neck may be blanched. An ounce will sow 150 feet drilled. Pkt., 10c; oz., 30c, postpaid.

## LETTUCE.

2 ounces of seed to 100 yards of row; 3 pounds to the acre. Forty to fifty days from seeding to maturity.

**Culture.**—For early outdoor culture, the seed may be planted in March or as early as the ground can be worked. Sow in drills 14 inches apart, and thin the plants to 4 inches apart. For the heading varieties, where large heads are desired, plants should be thinned 8 to 10 inches to row. Lettuce should be grown very rapidly; therefore the soil should be as rich as possible, by liberal manuring and thorough preparation.

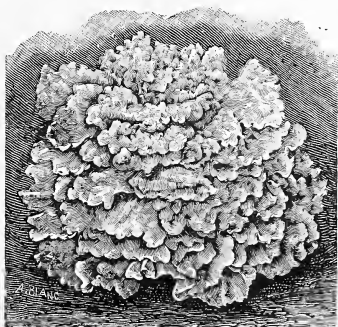


Grand Rapids.

**Our Big Boston Lettuce.**—(40 days.) The king of main-crop head Lettuce. Immense heads as solid as a cabbage. Blanches beautifully; crisp, tender, and free from bitterness. It produces immense heads, often 15 and 16 inches across and weighing enormously. It is a very large, robust-growing variety, rooting deeply, resisting hot, dry weather, very slow to run to seed, and a sure header under most trying conditions. The outer color is of a distinct apple green. It has been extensively grown by our customers in almost all sections of the country, from whom we receive most gratifying reports. Pkt., 10c; oz., 15c;  $\frac{1}{4}$  lb., 35c; lb., \$1.00, postpaid.

**Black-Seeded Simpson.**—(40 days.) An old standard, used largely for forcing and for early and late outdoor culture. Stands heat and drought well. Leaves large, thin, and very tender, of a light green color, slightly curled. A fine sort for all seasons. Pkt., 10c; oz., 15c;  $\frac{1}{4}$  lb., 35c; lb., \$1.00, postpaid.

**Early Curled Silesia.**—(38 days.) The old favorite; of dwarf, compact habit and quick growth, crisp golden leaves with finely curled edges. Pkt., 10c; oz., 15c;  $\frac{1}{4}$  lb., 35c; lb., \$1.00, postpaid.



Early Curled Simpson.

**White Summer Cabbage.**—(40 days.) A head Lettuce of remarkable quality, forming a solid, fine head of good size, and will withstand heat and drought, making it a good late variety. Pkt., 5c; oz., 15c;  $\frac{1}{4}$  lb., 45c; lb., \$1.50, postpaid.

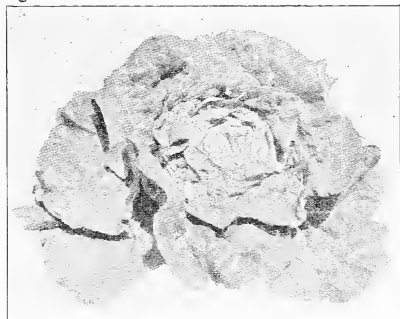
**Grand Rapids.**—(40 days.) A forcing variety of superior quality and beautiful appearance, strong grower, free from rot, and keeps crisp and tender without wilting when exposed for sale longer than any other forcing Lettuce. It is also a desirable variety for sowing in open ground. Pkt., 10c; oz., 15c;  $\frac{1}{4}$  lb., 35c; lb., \$1.00, postpaid.

**Prize Head.**—(38 days.) Very tender leaves of dark reddish brown color, variegated with dark green. Heads large and of good flavor. We sell more of this than any other brown-leaved variety. Pkt., 10c; oz., 15c;  $\frac{1}{4}$  lb., 35c; lb., \$1.00.

**Denver Market.**—(45 days.) Used either for forcing or open ground. An early variety, forming heads which are solid and of beautiful light green color, curled somewhat like Savoy Cabbage, and always crisp and tender. Pkt., 10c; oz., 15c;  $\frac{1}{4}$  lb., 35c; lb., \$1.00, postpaid.

**Early Curled Simpson.**—(40 days.) A good forcing sort. White-seeded. Resembles the Black-Seeded Simpson. Early. Pkt., 10c; oz., 15c;  $\frac{1}{4}$  lb., 35c; lb., \$1.50, postpaid.

**Improved Hanson.**—(40 days.) Forms very large, firm heads, resembling Cabbage, which are deliciously sweet, crisp, and tender; heads green outside and white inside. For outdoor culture unexcelled. It is one of the best heat-resisting sorts. Pkt., 10c; oz., 15c;  $\frac{1}{4}$  lb., 35c; lb., \$1.00, postpaid.



Summer Cabbage.

**Hubbard's Market.**—(Seed white.) This is a heading variety, forming a large, very compact head, similar in type to Salamander, slightly larger, and a little later maturing. Pkt., 8c, 2 for 15c; oz., 15c; 2 ozs., 35c;  $\frac{1}{4}$  lb., 40c; lb., \$1.50.

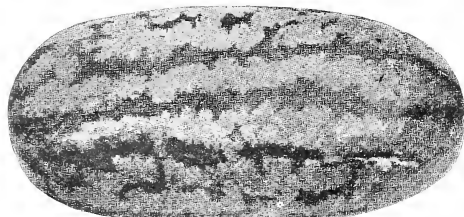
**Mammoth Black-Seeded Butter.**—A smooth-leaved Lettuce, forming very large, compact, cabbage-like heads of thick, yellowish green leaves, the inner ones beautifully blanched, very crisp, tender and buttery. It is one of the most largely grown sorts, suitable for the home garden, as well as market. Pkt., 8c, 2 for 15c; oz., 20c; 2 ozs., 35c;  $\frac{1}{4}$  lb., 55c; lb., \$1.75.

**Early White Self-Folding.**—(Seed white.) This excellent variety, also called Trianon, forms a large light green plant with a well-folded head of very good quality. The midribs are white and very prominent. The inner leaves are nearly white, slightly tinged with green, and are decidedly firm and sweet. This is considered the most reliable of the Cos or Celery Lettuces for the home garden or market gardeners' use in this country. Pkt., 8c, 2 for 15c; oz., 20c; 2 ozs., 35c;  $\frac{1}{4}$  lb., 60c; lb., \$2.00.

## WATERMELON.

3 ounces of seed to 100 yards of row; 4 pounds to the acre.

**Culture.**—Water Melons do well upon sod ground or upon land prepared for their reception by plowing down a crop of winter Wheat or winter Rye, the sod or grain aerating or keeping loose the soil. When the Apple is in bloom, the seed is planted in hills 10 feet apart in each direction. Two large shovelfuls of well-rotted stable manure should be dug and trampled into each hill and covered with earth. The cultivator should be prepared with quite 4 pounds of seed to the acre, that he may have a reserve for replanting in case of destruction of his plants by insect depredations or beating rains. Only one vine to the hill should be allowed to attain perfection. With 450 hills to the acre, there should be 900 first-class melons.



**Gypsy, or Georgia Rattlesnake.**

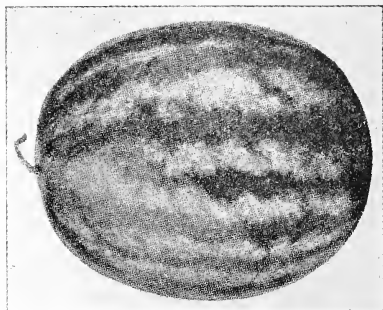
Much of the Melon seed offered throughout the country is the product of immature and deformed melons remaining in the field after all the choice fruits have been selected.

**Georgia Rattlesnake.**—(90 days.) Melons are long in shape, of light green color, with dark stripes, and grow of uniformly large size and symmetrical shape. In Georgia this variety is one of the most highly prized of all. The rind is remarkably thin, though it stands shipping well, and the flesh most tender, sweet, and luscious, it being a rare thing to find a melon that is not of superior quality. A satisfactory one to grow for all purposes. Pkt., 5c; oz., 10c;  $\frac{1}{4}$  lb., 35c; lb., \$1.00, postpaid.

**Rufus Rastus.**—(80 days.) Sweet, sugary, delicious flavor; a most superb Water Melon; large, more uniform shape, more prolific yielder than Kleckley Sweet. A dark green oval melon, 24 to 30 inches in length, 12 to 16 inches in diameter, thin rind. Best for the home garden, best for the market. Pkt., 5c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.25, postpaid.

**Tom Watson.**—(85 days.) A new variety, destined to become a leader among Melons, because of quality and shipping excellence. There is no variety, to our knowledge, that combines both essentials as does this Melon. Most sorts of extra quality are not tough enough to ship, and most shipping Melons are too tough to excel in quality. The Tom Watson is a large, oblong melon, the skin of which is dark green, with thick netting on the entire surface, quite distinct from other varieties. It averages 18 to 24 inches long and 10 to 12 inches in diameter, and weighs 50 to 60 pounds. The rind is thin, but tough, and flesh a bright, attractive red color, crisp, sweet, and delicious. The heart is large, with no core. Seeds brown, tipped white. Pkt., 5c; oz., 10c;  $\frac{1}{4}$  lb., 35c; lb., \$1.00, postpaid.

**Alabama Sweet.**—(95 days.) A very large, long melon of fine quality, very popular in the South, where it is grown extensively for shipping. Rind firm, rather dark green, slightly striped; flesh bright red, seed white. Pkt., 5c; oz., 10c;  $\frac{1}{4}$  lb., 35c; lb., \$1.00, postpaid.



**Harris' Earliest.**

**Sweet Heart.**—(80 days.) Early, large, oval, light green; rind thin, but firm; flesh bright red, sweet and tender. A splendid shipper. Pkt., 5c; oz., 10c;  $\frac{1}{4}$  lb., 35c; lb., \$1.00, postpaid.

**Cole's Early.**—(78 days.) A hardy, sure cropper; nearly round; flesh dark red; rind thin and extremely brittle; medium size; green striped with lighter shades. Pkt., 5c; oz., 10c;  $\frac{1}{4}$  lb., 35c; lb., \$1.00, postpaid.

**Triumph.**—(100 days.) Nearly round, large, and an excellent shipper; skin dark green and flesh bright red. Pkt., 5c; oz., 10c;  $\frac{1}{4}$  lb., 35c; lb., \$1.00, postpaid.

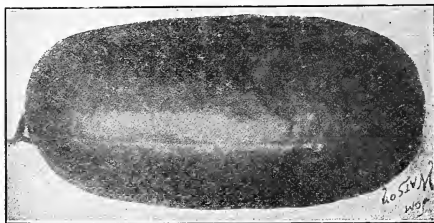
**Pride of Georgia.**—(85 days.) Oval-shaped, striped light and dark green; flesh bright red and sweet. Excellent shipper. Pkt., 5c; oz., 10c;  $\frac{1}{4}$  lb., 35c; lb., \$1.00, postpaid.

**Light Icing, or Gray Monarch.**—(90 days.) Skin mottled gray, flesh bright crimson, delicious flavor; shape long, and very productive. Pkt., 5c; oz., 10c;  $\frac{1}{4}$  lb., 35c; lb., \$1.00, postpaid.

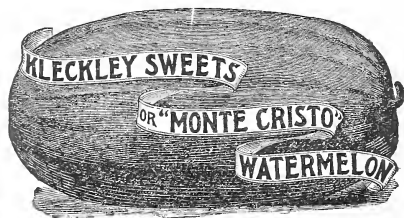
**Pinney's Early.**—(80 days.) Medium size; flesh a deep red; rind thin. Pkt., 5c; oz., 10c;  $\frac{1}{4}$  lb., 35c; lb., \$1.00, postpaid.

**Florida Favorite.**—(90 days.) Large, oblong; rind dark green, with stripes of lighter green. A popular variety in the South. Pkt., 5c; oz., 10c;  $\frac{1}{4}$  lb., 35c; lb., \$1.00, postpaid.

**Citron, Red-Seeded.**—For pickles and preserves only. Unavailable in raw state. Pkt., 5c; oz., 10c;  $\frac{1}{4}$  lb., 35c; lb., \$1.00, postpaid.

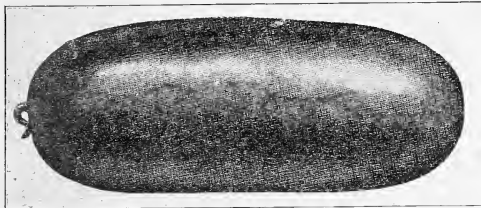


**Tom Watson.**



**Kleckley Sweets.**

## WATERMELON.



Halbert's Honey.

**Halbert Honey.**—(85 days.) Too much cannot be said of the merits of this grand new sort for market or home purposes. Its vine is of strong, vigorous growth, and sets fruit freely. Seed white. Flesh is bright red, exceedingly sweet and tender; absolutely stringless. Good keeper. In size it is large to mammoth, and presents a fine appearance on the market, as well as the dining-table. Seed direct from the originator. Pkt., 5c; oz., 10c; ¼ lb., 35c; lb., \$1.00, postpaid.

**General Pershing.**—The leader of them all. New 1919 introduction. The finest melon ever introduced. A wonderful producer. No culls. Stands dry weather. Disease-resistant. Eating qualities unequalled. The sparkling red flesh is as sweet as honey. Has very few seeds. Size uniformly large, ranging from 35 to 50 pounds. Color is light pea green. Will not sunburn. Ripens earlier than Tom Watson. Will keep in good condition for a long time after picking. Will stand long-distance shipping better than any other Melon. An excellent table melon. Pkt., 10c; oz., 25c; ¼ lb., 75c; ½ lb., \$1.35; lb., \$2.50.

**Fordhook Early.**—(80 days.) Extra early, fine quality, and large size; nearly round; skin green, flesh light red and very sweet. Pkt., 5c; oz., 10c; ¼ lb., 35c; lb., \$1.00, postpaid.

**Kolb's Gem.**—(95 days.) Has no superior for shipping purposes. Fruit large, oval-shaped, marked with mottled; brittle; medium size; green striped with lighter shades. Pkt., 5c; oz., 10c; ¼ lb., 35c; lb., \$1.00, postpaid.

**Ice Cream, or Peerless.**—(90 days.) Popular for home market. Medium size, almost round; skin pale green, slightly mottled; flesh bright scarlet, fine-grained. None better. Pkt., 5c; oz., 10c; ¼ lb., 35c; lb., \$1.00, postpaid.

**Harris' Earliest.**—An extra early melon of excellent quality. The fruits are exceptionally large for so early a variety, slightly oval with irregularly mottled broad stripes of light and dark green. The flesh is bright red, sweet and tender. Seed black. The vines are vigorous and productive. One of the best varieties for northern latitudes. We have carefully observed this splendid variety in our trials for several seasons and are convinced that it is the very best first early melon for the home garden. Pkt., 5c; oz., 10c; ¼ lb., 35c; lb., \$1.00.

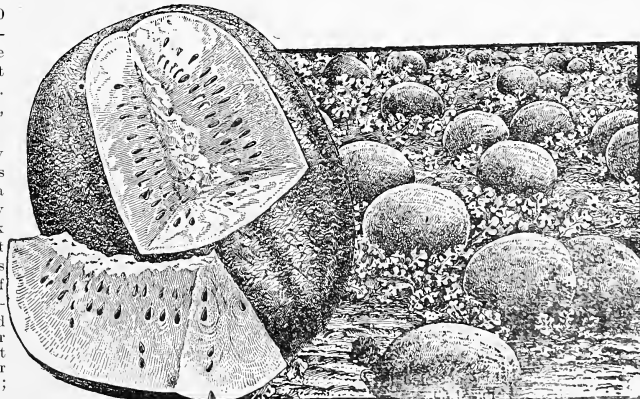
**Apple Pie Melon.**—This is a novelty which will be appreciated in many sections of the country and especially so during seasons when apples are scarce or high in price. The vine and fruit are quite similar to a watermelon and they are easily grown on any good soil. Each vine produces from five to fifteen fruits, and one of the large size melons will make as many pies as a bushel of apples. They keep nice and fresh all winter, so that they can be used at any time, and any surplus may be fed to the stock. In fact, it would pay to grow them for this purpose alone, as they can be kept and fed fresh all winter. In Oklahoma, hundreds of acres are grown for stock. They leave them out all winter. A little freezing does not injure them. Pkt., 5c; oz., 20c; ¼ lb., 40c; ½ lb., 70c; lb., \$1.25.

**Kleckley Sweet.**—(85 days.) This is one of the best-flavored Melons in cultivation and of a shape and color that is extremely desirable. The rind is very dark green, very thin, flesh deep scarlet, fine, and of delicious quality. For the home market and family garden it is decidedly the best. Pkt., 5c; oz., 10c; ¼ lb., 35c; lb., \$1.00, postpaid.

**The Princess.**—A new variety of unsurpassed quality for home use. This melon is in a class by itself when it comes to sweetness and luscious flavor. Anyone who is growing melons for their home use can secure no variety equal to it, and we would urge you to plant generously of it. The melon is round, green, thin-skinned, growing 6 to 8 inches in diameter. Very popular wherever grown. Pkt., 10c; oz., 20c; ¼ lb., 60c; ½ lb., \$1.10; lb., \$2.00, postpaid.

**Round Light Iceing.**—The fruits are small-medium, nearly round, greenish white, slightly veined or dotted with light green. The flesh is bright, light red, very sweet and tender. Seed white. Pkt., 5c; oz., 10c; ¼ lb., 35c; lb., \$1.00.

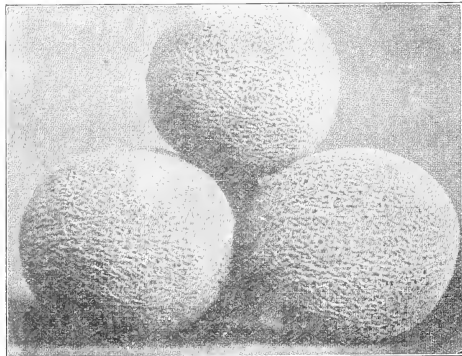
**Monte Cristo.**—This is a northern strain of Kleckley Sweets and very similar to that grand melon; is very sweet and luscious; very large dark green color outside, beautiful red core, and it is never stringy. Sweetest, juiciest, crisp and solid, never having hollow or pithy center when ripe. Great for market gardeners. We have a select strain of this melon, and guarantee our seed selected from choicest specimens. Do not fail to give it a trial, for there is no melon of better quality. Pkt., 5c; oz., 10c; ¼ lb., 35c; lb., \$1.00, postpaid.



## CANTALOUPE, OR MUSK MELON.

2 ounces of seed to 100 yards of row; 4 pounds to the acre.

**Culture.**—Melons do best in sandy soil or sod land and the soil should be made rich. The hills can be put 4 to 6 feet apart, with ten to twelve seeds in each hill. Plant the seeds an inch deep, and when danger of frost is over thin to four good plants to a hill. Cultivation should be kept up as long as possible. One ounce of seed is sufficient for 50 hills; 2 pounds per acre. Plant in May or June.



Rocky Ford.

## GREEN-FLESHED VARIETIES.

**Netted Rock Ring.**—(70 days.) In many sections considered an improvement on the Rocky Ford because of its more perfect netting, safeguarding it against abrasion or rubbing in transportation. Shape almost round and without ribs. Pkt., 5c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.25.

**Improved Green Nutmeg.**—(75 days.) A strain of the old Green Nutmeg. Fruit very rich, melting, and of exquisite flavor; flesh light green. Very productive. The original variety was a standard sort for many years, and is one of the best main-crop sorts. Pkt., 5c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.25.

**Extra Early Hackensack.**—(70 days.) We offer under this name distinct stock, very different from and much superior to that often sold as Extra Early Hackensack. The fruits are nearly two weeks earlier than Hackensack, medium to large-sized, nearly round or somewhat flattened, evenly and deeply ribbed, and with very coarse netting. The skin is green, slightly tinged with yellow as the fruit matures; the flesh is green, a little coarse, but juicy and sweet. Pkt., 5c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.25.

**Netted Gem, or Rocky Ford.**—(70 days.) This has become one of the most popular of small or crate Melons, and is shipped in large quantities from Colorado and Arizona. The vines are vigorous and productive. The fruits are oval, slightly ribbed, densely covered with fine netting. Flesh green, very sweet and highly flavored. We offer an exceptionally fine stock of this early sort, the fruit being very uniform in shape and quality and of the even size that is so desirable in a shipping Melon. Pkt., 5c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.25.

**Baltimore, or Acme.**—(80 days.) The fruits are medium-sized, oval or long oval, slightly pointed at stem end, slightly ribbed, and are covered when ripe with coarse netting. The flesh is thick, green, well flavored and sweet. This variety is a very productive, sure-cropper, of good quality; one of the most desirable green fleshed Melons of medium size. Pkt., 5c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.25.

**Honey Dew.**—The Melon with an appropriate name. A new member of the Melon family, propagated after seven years of experimenting, is being introduced to California soil by a representative of large Melon shippers of Chicago. The new fruit, which is called the Honey Dew Melon, is a cross between the Rocky Ford Cantaloupe and a South Sea Island fruit. Pkt., 20c; oz., 60c;  $\frac{1}{4}$  lb., \$1.50.

**Hackensack.**—A large, deeply-netted melon, flattened at the ends, of most delicate flavor, and very productive. Pkt., 5c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.25.

**Jenny Lind.**—Vines vigorous and productive. Fruits small, somewhat flattened, deeply ribbed and well netted. Flesh green and exceedingly sweet. This variety ripens early and on account of its size is desirable as a table melon. We know of no green-fleshed Melon maturing equally as early that is of more excellent quality. Pkt., 5c; oz., 10c;  $\frac{1}{4}$  lb., 35c;  $\frac{1}{2}$  lb., 60c; 1 lb., \$1.00, postpaid.

## ORANGE-FLESHED VARIETIES.

**Surprise.**—(60 days.) This occurs with both green and orange flesh, the orange-colored variety being much superior. Very productive of medium-sized fruits, nearly round, sometimes a little flattened. Color of skin light creamy green, flesh yellow, little netting; very sweet and fine flavor. Earlier than Tip-Top. Pkt., 20c; oz., 75c;  $\frac{1}{4}$  lb., \$1.75; lb., \$5.00.

**Extra Early Osage.**—(75 days.) Fully a week earlier than the Osage, fruits a little smaller, more nearly round, and the netting extends over more of the surface. These very desirable features, combined with the thick, deep salmon-colored flesh and small seed cavity characteristic of the Osage, make this Melon deserving of a place in every home and market garden. Pkt., 5c; oz., 20c;  $\frac{1}{4}$  lb., 50c; lb., \$1.50.

**Burrell's Gem.**—(80 days.) A truly delicious Melon for home use, or if you desire a variety which will bring a fancy price on the market, we unhesitatingly recommend the Burrell Gem. It is about the same size and shape as Rocky Ford, but has rich golden yellow flesh of the most delicious flavor, solid, and a most desirable shipping sort. Seed cavity is very small. The melons average about 6 inches long,  $4\frac{1}{2}$  inches in diameter, and weigh 2 $\frac{1}{2}$  pounds. Shipments of these melons to Chicago, St. Louis, New York, and elsewhere brought 50 per cent more than the best Rocky Fords. Pkt., 5c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.25.

**Banana.**—Externally it is of a creamy white or delicate straw color. The flesh (the melon being nearly solid) is of a rich salmon. The quality is first rate when the melons are thoroughly ripe. It grows from 18 inches to 2 feet in length, and is very prolific. When ripe, it smells like a banana. Pkt., 5c; oz., 25c;  $\frac{1}{4}$  lb., 50c; lb., \$1.75.

**Casaba Musk Melon.**—(140 days.) This is a class of late maturing Musk Melons which do not ripen on the vines in the North, but are gathered before freezing weather and stored in a cool place and brought to a warm room for ripening; can be eaten any time up to Christmas, as they keep very long. Shipped from California in carloads during winter. Pkt., 10c; oz., 25c;  $\frac{1}{4}$  lb., 75c; lb., \$1.75.

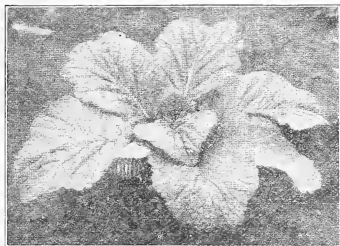
**Emerald Gem.**—This is a variety of excellent quality. It is of medium size. The skin is perfectly smooth and of a deep emerald green color. The flesh is thick and of a suffuse salmon color, and ripens to the green rind. It is peculiarly crystalline in appearance and so very juicy that it almost drops to pieces when dipped out with a spoon. The flavor is very sweet and luscious. The vines are hardy and very prolific, and the melons mature extremely early. Pkt., 5c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.25, postpaid.

**Tip-Top Melon.**—This grand Muskmelon ought to be planted by every gardener. It always pleases. The testimony of all who use Tip-Top is, that every melon produced, whether large or small, early or late, is a good one; sweet, juicy, finest flavor, firm but not hard-fleshed, and eatable to the outside coating. Its appearance on the market is very attractive—sells on sight. Gardeners tell us that their customers soon learn to pick them out and will have no other kind. The fruit is of large size, nearly round, evenly ribbed, and moderately netted. It is perhaps the most productive melon known. Pkt., 5c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.25, postpaid.

**MUSTARD.**

1 ounce will sow 50 feet of row.

**Culture.**—The leaves of these varieties of Mustard, as here listed, make excellent greens, of sharp pungent flavor, and are cooked the same as spinach or beet leaves. Sow the seed in drills early in the spring and at frequent intervals throughout the summer to secure a constant supply of fresh greens. Mustard is hardy and easily grown.



**Large Smooth-Leaved Mustard.**

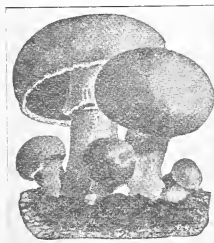
**Ostrich Plume.**—Most beautiful variety, of very superior flavor. These leaves are beautifully ruffled and curled and curve outward, like graceful ostrich plumes. They are excellently adapted for garnishing. It originated in the South, and stands hot weather exceedingly well. Sow in February, March, or April, or during September and October. Pkt., 5c; oz., 10c; ¼ lb., 30c; lb., \$1.00, postpaid.

**Southern Giant Curled.**—It is highly esteemed in the South, where the seed is sown in the fall and plants used early in spring as a salad. Seeds brown. Plants are 2 feet high; enormous bunches. Pkt., 5c; oz., 10c; ¼ lb., 30c; lb., \$1.00, postpaid.

**Chinese.**—A giant curled variety, with leaves double the size of the ordinary. Pkt., 5c; oz., 10c; ¼ lb., 35c; lb., \$1.00, postpaid.

**White.**—Leaves are light green, mild, and tender when young; seed light yellow in color. Pkt., 5c; oz., 10c; ¼ lb., 30c; lb., \$1.00, postpaid.

**Brown or Black Mustard.**—More pungent in flavor than the White. Seed black. Pkt., 5c; oz., 10c; ¼ lb., 30c; lb., 90c, postpaid.

**MUSHROOM SPAWN.**

for a few days, and as soon as the heat subsides to 90 degrees make holes in the bed about a foot apart each way, into which put pieces of spawn 2 to 3 inches in diameter; fill up the hole with compost, and at the expiration of a week or ten days the spawn will have thoroughly diffused itself through the

**Culture.**—Mushrooms may be grown in cellars, under benches in greenhouses, or in sheds wherever the temperature of 50 degrees can be kept up during the winter. The beds should be made from November to February according to the time the mushrooms are wanted, and it requires about two months for them to begin bearing. Secure fresh horse dung, free from straw and litter, and mix an equal bulk of loam from an old pasture with it. Keep this under cover, taking care to turn it every day to prevent it from heating, until the pile is large enough to make a bed of the required size. Three or four feet wide, eight inches deep and any length desired are the proper proportions for a bed, but this may be varied. Prepare the mixture of loam and manure, making the bed in layers and pounding down each with the back of a spade. Leave this to heat through

bed. Spread a layer of soil over the heap to the depth of 2 inches, and cover with 3 or 4 inches of hay, straw, or litter. Examine bed often to see that it does not get dry. Take special care, however, when water is given, that it be at a temperature of 100 degrees. One brick to a bed 6 feet square.

**American Pure Mushroom Spawn.**—Bricks, 25c each; 10 bricks at 22½¢; 25 bricks at 20c; 50 to 100 bricks at 18c.

**NASTURTIUM.**

Nasturtiums of all varieties are useful for furnishing tender seed-pods which make delicious pickles. The seeds for pickling should be gathered while green and with a portion of the stem attached. Pick them over and place in a jar until filled; then cover them with cider vinegar that has been brought to the boil and is still warm, to keep for winter use.

**Dwarf Mixed.**—Pkts., 5c and 10c; oz., 15c; ¼ lb., 35c; lb., \$1.10.

**Tall Mixed.**—Pkts., 5c and 10c; oz., 15c; ¼ lb., 35c; lb., \$1.10.

**OKRA, OR GUMBO.**

Okra is a highly esteemed vegetable throughout the entire country and the demand is getting bigger and bigger all the time. The young tender pods are used mainly in soups and stews, although they are excellent when boiled and served hot or cold as a salad. Some persons may not enjoy the flavor of Okra at first, but after eating it a few times a taste for it is naturally acquired. Plant 1 ounce of seed to 50 feet of row; about 8 pounds to the acre. Three-foot rows are good, planting the seed 3 to 4 inches apart to allow space for the development of the stem.



**White Velvet Okra.**

**Mammoth Long-podded Okra.**—This is a distinct variety and is largely cultivated in the South, principally Florida and Texas, for shipping purposes. Very productive, pods starting to shoot out within three or four inches from the bottom of the stalk, and the whole plant is covered with them to the height of a man's head (5 to 6 feet). Pods are of an intensely dark green color of unusual length, frequently 9 to 10 inches long. Are very slim and do not harden up as is usually the case with other long, slender sorts. Pkt., 5c; oz., 10c; ¼ lb., 20c; lb., 60c, postpaid; 10 lbs., not prepaid, \$5.00.

**Improved Dwarf.**—A distinct early variety; pods short, but very numerous. Pkt., 5c; oz., 10c; ¼ lb., 30c; lb., 75c, postpaid.

**White Velvet.**—Pods large, white, smooth, superior quality an excellent bearer. Pkt., 5c; oz., 10c; ¼ lb., 30c; lb., 75c, postpaid.



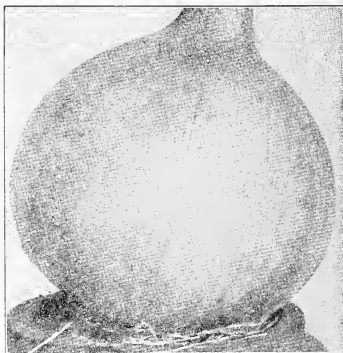
## ONION.

Onion-growers who use large quantities of seed should write for special prices.

One ounce will sow 100 feet of drill. To grow large onions from seed, sow 5 pounds to the acre; to grow small sets, 60 to 70 pounds to the acre will be required.

Raising a crop of onions requires too much labor and expense to run the risk of planting anything but reliable seed. There is no other vegetable in which the quality of the seed exerts so great an influence. Fully realizing the importance of good seed, we have made quality our first consideration in the growing and marketing of Onion seed. Our stock is all home-grown, from choice selected bulbs, and is the best that can be produced. We guarantee every pound of onion seed to be new seed of high germination. Our seed is all tested and we know it will grow and give satisfaction. It would be folly to send you poor seed. The risk is too great to take chances on cheap, poor seed. Buy our seed and get the best.

Our prices are attractive and our seed is the best strain, Guaranteed to Grow.



**Southport Yellow Globe.**

grows to an average size of 2 to 3 inches in diameter, and has all the good qualities mentioned above. Pkt., 10c; oz., 25c;  $\frac{1}{4}$  lb., 75c; lb., \$2.50, postpaid.

**Southport Red Globe.**—(100 days.) The handsomest of all the Red Onions; large, solid, and of perfect shape. Red Globe is the latest of the Southport Onions, ripening from a week to ten days after the Yellows. The bulbs are uniform, of a rich red color, ripen evenly, and yield the largest percentage of marketable onions. They ripen down hard and solid, keep well, and their beautiful appearance insures a ready market. Southport Red Globe will yield a heavier crop than either the Yellow or White Globe. Pkt., 10c; oz., 25c;  $\frac{1}{4}$  lb., 75c; lb., \$2.50, postpaid.

**White Portugal, or Silverskin.**—A large flat White Onion of mild and pleasant flavor, hard and fine-grained and a good keeper. Extensively sown for sets, and is also largely grown for pickling. Pkt., 10c; oz., 30c;  $\frac{1}{4}$  lb., 85c; lb., \$3.00.

**Australian Brown.**—A long keeper; early; a fine cropper. Pkt., 10c; oz., 30c;  $\frac{1}{4}$  lb., 85c; lb., \$2.75.

## ONION SETS.

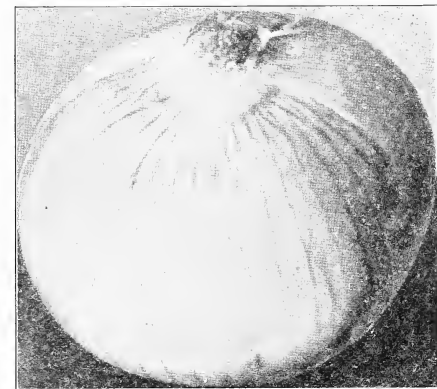


To raise Onion sets from seed, use good ground prepared as for large onions and sow the seed very thick in broad drills, using 10 to 60 pounds per acre. If the seed is sown thin, the bulbs will not only be too large for sets, but will not be of the right shape, and if sown thick on poor land, they will be necky or bottle-shaped. Onion seed sown for sets may be planted somewhat later than if a crop of large bulbs is desired.

**Red Bottom Sets.**—Treated precisely as top onions are, setting them out in the spring instead of sowing seed. Lb., 30c, postpaid; 10 lbs., \$2.00.

**Yellow Bottom Sets.**—Like the preceding, except in color and used in the same manner. Lb., 30c, postpaid; 10 lbs., \$2.00.

**White Bottom Sets.**—These do not keep as well as the red or yellow, but produce beautiful white onions early in the season. Lb., 30c, postpaid; 10 lbs., \$2.50.



**Prizetaker.**

**Prizetaker.**—(90 days.) This is beyond question the handsomest Onion grown. Yellow or straw color, flesh white, of enormous size, in many cases weighing from 3 to 3 $\frac{1}{2}$  pounds. Very hardy and a good keeper. Flavor sweet, very mild, and tender. Pkt., 10c; oz., 30c;  $\frac{1}{4}$  lb., \$1.00; lb., \$3.00, postpaid.

**Yellow Globe Danvers.**—(100 days.) A very handsome, round American variety of large size; very fine and mild; an excellent keeper. Pkt., 10c; oz., 25c;  $\frac{1}{4}$  lb., 75c; lb., \$2.50, postpaid.

**Southport White Globe.**—(100 days.) One of the most beautiful Onions grown, being of symmetrical globe shape, with a smooth satin-white skin, forming a perfect silver ball. It grows to a large size, averaging 7 $\frac{1}{2}$  to 9 inches in circumference, and is solid and heavy. The flesh is purest white, close and fine-grained, mild, and of moderate flavor. It is a heavy cropper, yielding under good culture up to 900 bushels per acre. Our strain of this seed is grown from picked thin-necked bulbs, which ripen so uniformly and so thoroughly that the Onions keep nearly as well as the Red and Yellow varieties. Pkt., 10c; oz., 30c;  $\frac{1}{4}$  lb., \$1.00; lb., \$3.25, postpaid.

**Large Red Wethersfield.**—The standard variety throughout the West, as they are the most hardy, and an immense crop can be raised when more tender varieties are not profitable. One of the best winter keepers. It is not an early ripening sort, but continues to grow throughout the season, consequently making very large onions. The outer skin is a deep rich purplish red, flesh white, lightly tinged with pinkish rose. Our seed of this variety is extra select and can not be excelled. Pkt., 10c; oz., 25c;  $\frac{1}{4}$  lb., 75c; lb., \$2.50, postpaid.

**Southport Yellow Globe.**—(110 days.) The true Southport Onions are very handsome globes of superior quality. They are excellent keepers, uniform in size and form, and command higher market prices than any other kind. We highly recommend the Yellow Globe. It ripens a little earlier than the Red.



## PEAS.

**Culture.**—Sow as early as possible a few of some of the early varieties in warm sandy soil. The seed can be sown in rows in a very satisfactory way. It is best to sow in an open way with a hoe, the full width of it, and broadcast the seed thinly in the bottom. Later plantings should be of the wrinkled varieties; they are better yielders, sweeter, and very highly flavored. A pint will sow a row of 50 feet. Use from  $1\frac{1}{2}$  to  $1\frac{3}{4}$  bushels to the acre, making rows from  $2\frac{1}{2}$  to 3 feet apart. Ground should be cultivated about every two weeks, keeping weeds and grass free from same. Early varieties will mature in about fifty or sixty days, later varieties in about seventy to eighty-five days.

**Peas are a very short crop; Order Early.**

In a green state, the peas are sweet and delicious. Pkt., 10c;  $\frac{1}{2}$  lb., 30c; lb., 50c, postpaid.

**Champion of England.**—(62 days.) We offer a select strain of this grand old favorite. It is a main crop and late variety of vigorous growth, about 5 feet high. Pkt., 10c;  $\frac{1}{2}$  lb., 30c; lb., 50c, postpaid.

**Telephone.**—Large-podded variety of Pea for general crop.

Vines are very strong in growth and average 18 to 20 pods per stalk. The pods are of large size, containing 6 to 7 peas each, which are a pale green color and of a delicious flavor. Height,  $3\frac{1}{2}$  feet. Pkt., 10c;  $\frac{1}{2}$  lb., 30c; lb., 50c, postpaid.

**Stratagem.**—Vines are strong, vigorous, and covered with immense pods, many of which measure 5 inches in length and contain frequently ten fine large, richly flavored, uniform wrinkled peas. Each seed, as a rule, produces two stalks. Peas are dark greenish color, and retain their tenderness and sweetness. Pkt., 10c;  $\frac{1}{2}$  lb., 30c; lb., 50c, postpaid.

**Black Eye Marrowfat.**—An excellent variety, about 5 feet high; pods large; prolific bearer, and one of the best Marrowfat sorts. Pkt., 10c;  $\frac{1}{2}$  lb., 30c; lb., 50c, postpaid.

**Canada Field Peas.**—For dairy cows and hogs they are equal to corn and six weeks earlier. They should be sown early in April with Oats, using 2 bushels of Oats and 2 bushels of Peas per acre. The Peas should be sown first and plowed under to a depth of about 4 inches, then sow and harrow in the Oats. They will be ready to cut in July. As a fertilizer, they come next to Clover and will grow on land that will not produce Clover. Pkt., 10c;  $\frac{1}{2}$  lb., 30c; lb., 50c, postpaid.

**White Marrowfat.**—(65 days.) A favorite sort. Five feet. Pkt., 10c;  $\frac{1}{2}$  lb., 30c; lb., 50c, postpaid.

**Sugar, or Edible-Podded.**—When cooked, they are equal to the best snap beans. Being hardy, can be planted early in spring. Of strong, upright habit, growing about 12 to 15 inches high. The pods are gathered while young and boiled whole. Pkt., 10c;  $\frac{1}{2}$  lb., 30c; 1 lb., 50c, postpaid.

## Alaska.

**Alaska.**—(45 days.) Without doubt the earliest and best smooth blue Pea, ranking with the First-and-Best as to evenness, uniformity in ripening, and earliness. Ripens all the crop at once; invaluable for market gardeners and canners. Vines 2 to  $2\frac{1}{2}$  feet high. Pkt., 10c;  $\frac{1}{2}$  lb., 30c; lb., 50c, postpaid.

**Delicia.**—(52 days.) The vine is of vigorous, robust growth, about 2 feet high, heavy stemmed, with luxuriant healthy foliage; it bears uniformly large, handsome pods of large and luscious peas, and although it commences bearing so very early, it continues for a long time. The peas also remain sweet and tender for some time after they are fit to pick. Pkt., 10c;  $\frac{1}{2}$  lb., 30c; lb., 50c, postpaid.

**Nott's Excelsior.**—(53 days.) Fifteen inches. Dwarf wrinkled Pea. The pods average fully one-third larger than the American Wonder, and it is all ready for picking at one time. Each pod contains six to eight large peas, unusually sweet. Pkt., 10c;  $\frac{1}{2}$  lb., 30c; lb., 50c, postpaid.

**First-and-Best.**—(47 days.) A round-seeded Pea that can be sown when frost is barely out of the ground, before it is safe to sow wrinkle-seeded sorts. This, with its quickness of growth and maturity, renders it the earliest Pea on record. Unequal for excellence, yield, size pod, regularity. It is  $2\frac{1}{2}$  feet high. Pkt., 10c;  $\frac{1}{2}$  lb., 30c; lb., 50c, postpaid.

**Prosperity.**—(58 days.) This remarkable Pea is not only large and of best quality, but it is also nearly as early as the small, round, extra early sorts. It is hardy and may be planted as soon as the ground is fit to work in the spring, along with smooth Peas. The vine grows to a height of about 30 inches. The pods are of a light green color and measure 4 inches or more in length, being as large as Telephone and equally as well filled with luscious peas—8 to 10 in a pod. The peas are of first-class table quality, and retain their color and attractive appearance after cooking. Pkt., 10c;  $\frac{1}{2}$  lb., 30c; lb., 50c, postpaid.

## NINE MAIN-CROP VARIETIES.

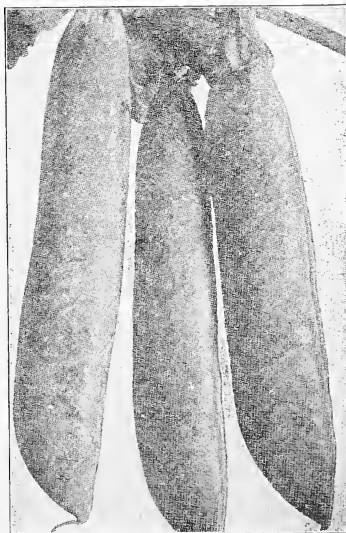
**Everbearing.**—(60 days.) A green-seeded, wrinkled, slightly flattened variety. Height about 2 feet. Very hardy, a vigorous grower and an enormous cropper. Pods and peas of large size and superior quality. Pkt., 10c;  $\frac{1}{2}$  lb., 30c; lb., 50c, postpaid.

**Abundance.**—(60 days.) Three feet. A deservedly popular variety, branching from the bottom and bearing abundantly roundish pods 3 to  $3\frac{1}{2}$  inches long, filled with six or eight large wrinkled peas of fine quality. Pkt., 10c;  $\frac{1}{2}$  lb., 30c; lb., 50c, postpaid.

**Horsford's Market.**—(58 days.) Two feet. A grand wrinkled Pea, noted for its uniform growth and prodigious yield. The pods, though of medium size, are packed with peas of sweet, delicious flavor. Pkt., 10c;  $\frac{1}{2}$  lb., 30c; lb., 50c, postpaid.

**Bliss' American Wonder.**—(55 days.) The earliest of the wrinkled Peas and best for family use. Very dwarf, 9 inches high, and remarkably productive; well-filled pods; flavor unsurpassed. Pkt., 10c;  $\frac{1}{2}$  lb., 30c; lb., 50c, postpaid.

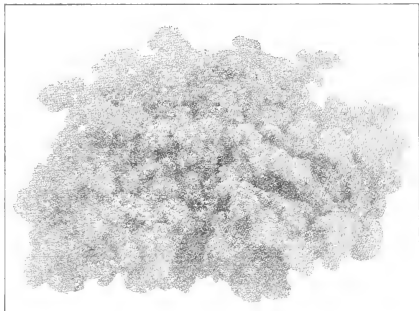
**McLean's Little Gem.**—(58 days.) Eighteen inches. A few days later than First-and-Best. Matures in eight weeks. When



Cradus, or Prosperity Pea.

## PARSLEY.

**Culture.**—Parsley is easily grown, only it takes several weeks for it to come up; hence the ground where it is sown is often covered with weeds or dug over with the belief that the seed is no good. The seed may be soaked several hours in warm water before sowing, which will hasten germination. Sow it early in the spring in rows a foot apart. It can also be used to border beds, making a very pretty effect. One ounce will sow a 150-foot row. A few plants can be taken up in the fall and put in pots or boxes in a sunny window, and will continue to furnish leaves throughout the winter.



Champion Moss Curled.

**Double Curled.**—An excellent variety for garnishing meats. Pkt., 10c; oz., 15c;  $\frac{1}{4}$  lb., 35c; lb., \$1.10, postpaid.

**Champion Moss Curled.**—Leaves beautifully curled and mossy. Pkt., 10c; oz., 15c;  $\frac{1}{4}$  lb., 35c; lb., \$1.10, postpaid.

**Hamburg.**—The edible portion is the fleshy root. It is highly esteemed for flavoring soups, stews, etc. Pkt., 10c; oz., 15c;  $\frac{1}{4}$  lb., 35c; lb., \$1.10, postpaid.

## PARSNIP.

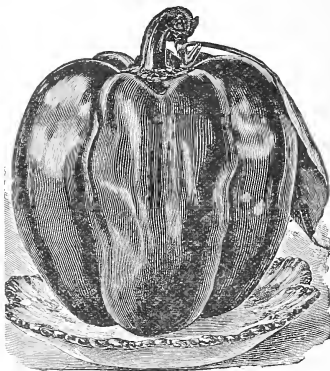
1 ounce will sow 200 feet of drill; 5 pounds will sow an acre in drills.

**Culture.**—Parsnips are usually grown on deep, rich, sandy soil, but will make good roots on any soil which is deep, mellow, and moderately rich. Fresh manure is apt to make the roots coarse and ill-shaped. As the seed is sometimes slow and uneven in growth, it should be sown as early as possible, in the rows  $2\frac{1}{2}$  feet apart, cover  $\frac{1}{2}$  inch deep, and press the soil firmly over the seed. Give frequent cultivation, and thin the plants to 6 inches apart in the row.

**Improved Table Guernsey.**—A greatly improved and wonderfully fine strain of the Guernsey Hollow Crown Parsnip. The roots do not grow as long as the Hollow Crown, but are of greater diameter and more easily gathered. A very heavy cropper. Roots are smooth, with a deep hollow crown and a small top. Flesh fine-grained, sweet, and of excellent quality; cooks evenly, center being as fine, soft, even quality as outside portion. Pkt., 10c; oz., 15c;  $\frac{1}{4}$  lb., 30c; lb., \$1.50.

**Improved Hollow Crown.**—This greatly improved strain is about the same shape as the old sort but smoother and of more even quality; fine-grained and excellent. Pkt., 10c; oz., 15c;  $\frac{1}{4}$  lb., 30c; lb., \$1.10.

## PEPPER.



Chinese Giant.

**Culture.**—Sow the seed  $\frac{1}{4}$  inch deep in hot-bed, greenhouse, or warm window in March or April. After all danger of frost, set out in open ground. A warm, moist soil is best, with plenty of rotted manure plowed under. Set in rows 2 to 3 feet apart and 18 inches apart in the rows. Cultivate frequently throughout the season to keep the soil mellow and free from weeds. One ounce will produce about 1,500 plants;  $\frac{1}{4}$  pound to transplant for an acre.

**Large Bell, or Bull Nose.**—Early and mild; a favorite for pickling; very prolific. Pkt., 10c; oz., 60c; lb., \$2.25, postpaid.

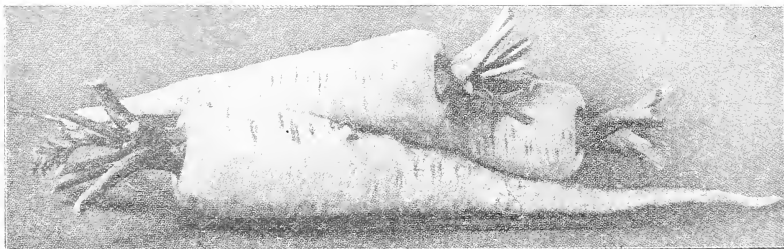
**Chinese Giant.**—Absolutely the largest red variety. Not only is it early in ripening and immensely productive for so large a pepper, but its enormous size will cause it to sell most readily. The monstrous fruits are of thick, blocky form, and of most brilliant, glossy scarlet. They grow 4 to 5 inches broad at the top and are of equal length. Flesh is extremely mild and unusually thick; makes an excellent salad sliced and served like tomatoes. Pkt., 10c; oz., 80c;  $\frac{1}{4}$  lb., \$2.75, postpaid.

**Long Red Cayenne.**—Cone-shaped red pods. Used largely for sauce and pickles. Pkt., 5c; oz., 60c;  $\frac{1}{4}$  lb., \$2.25, postpaid.

**Ruby King.**—Large and handsome. Mild flavor. Ruby-red color. Can be sliced for salad or for stuffing or minced pickles. Pkt., 10c; oz., 55c;  $\frac{1}{4}$  lb., \$2.00, postpaid.

**Red Chili.**—A late variety, used in the manufacture of pepper sauce. The bright rich red pods are about 2 inches long,  $\frac{1}{4}$  to  $\frac{1}{2}$  inch in diameter at the base, tapering to a sharp point, and exceedingly pungent when ripe. Requires a long, warm season. The plants should be started quite early in hot-beds. Pkg., 10c; oz., 40c;  $\frac{1}{4}$  lb., \$1.50, postpaid.

**Perfection.**—Of the Pimiento type; sweet and large; deep green and when ripe of deep scarlet. Meat two or three times thicker than other varieties. Outyields all others. Pkt., 10c; oz., 50c;  $\frac{1}{4}$  lb., \$2.75, postpaid.



Hollow Crown Parsnip.

## PEANUTS.

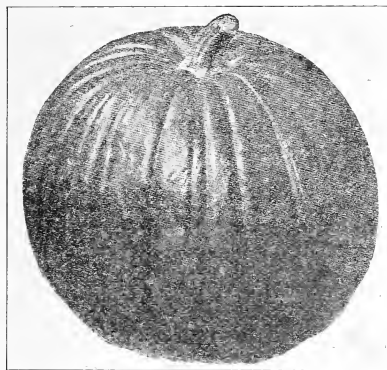
The Peanut is worthy of more general cultivation throughout the South, especially in the boll weevil district, where in many cases it will be found more profitable than Cotton. The Peanut is a soil-builder and renovator. If included in the crop rotation and properly handled, peanuts are not exhaustive of soil fertility. The tops of peanuts make fine hay, relished by all stock, while the roots furnish rich food for both man and stock. The best soil is one of a sandy, loamy nature, which has a red clay subsoil, as this indicates lime, which is essential for this plant. They yield 40 to 100 bushels to the acre, according to how well the crop is managed. Peanuts should be shelled before planting, but can also be planted in the hull 16 to 18 inches apart. They should be planted from March to June in rows about 2½ or 3 feet apart, dropping the nuts 8 to 10 inches apart, one in a hill. Cover 1 or 2 inches. Cultivate three or four times with a cultivator, so as to loosen the earth and keep down the weeds. When they mature, pull them up, turning the roots to the sun. In bright weather they will be cured sufficiently in 24 hours. It requires two bushels in hull to plant an acre.

**Tennessee Red.**—(28 pounds to the bushel.) Small-podded variety; similar to Spanish, except that the pods are longer, sometimes containing five to six peas crowded together; peas dull red in color. This variety is well adapted to stock-feeding, but does not sell on the market, owing to the color and quality of the peas. Lb., 30c; 3 lbs., 80c, postpaid. Pk., 85c; bu., \$2.50, not prepaid. Prices subject to market changes. Write for quantity prices.

**Spanish Peanut.**—In addition to their value for growing for the nuts, these are very largely used in the South as a forage and fattening crop for hogs and other stock. They are early to mature, very productive, and in the far South where they can be planted during March and April, two crops can be made in one year, the second crop being planted early in July, the tops making a hay crop and the nuts a grain crop. This variety frequently yields 60 bushels of marketable peanuts and two tons of hay per acre. Lb., 35c; 5 lbs., 30c, postpaid.

**Early Jumbo.**—This very desirable variety is as early as the earliest, most hardy. very prolific, and of the best quality. Boys, here is a chance for you. Think of growing Peanuts in your own garden and having plenty of them to eat. Shell nuts carefully, so as not to break inside skin; plant as soon as ground becomes warm from 2 to 3 feet apart each way, four or five to the hill, covering 2 inches. Soil should be deep and mellow. Produce from 25 to 70 bushels to the acre. As easily cultivated as Corn. Lb., 35c; 5 lbs., 30c per lb., postpaid.

## PUMPKIN.



Sugar Pumpkin.

**Culture.**—Pumpkins will grow almost anywhere, but rejoice in rich soil in many varieties the size and weight depend almost wholly on culture and fertility of the land. Many Pumpkins are exceptionally good for pies, other sorts are fit only for feeding live stock. Plant in hills 8x8 feet. Use ¼ pound for seventy-five hills; 3 to 4 pounds per acre. Put seed in ground in May or June. Fight bugs with Bug Death, Slug Shot, or air-slacked lime.

**Tennessee Sweet Potato.**—Pear-shaped medium-sized Pumpkins, slightly ribbed, of creamy white color and excellent flavor. Pkt., 10c; oz., 20c; ¼ lb., 50c; lb., \$1.50.

**Small Sugar.**—Small, round, yellow pumpkins of excellent quality. An abundant yielder, eight to ten fruits often growing on one vine. Pkt., 10c; oz., 20c; ¼ lb., 50c; lb., \$1.50.

**Large Sweet Cheese, or Kentucky Field.**—Very early; large-sized pumpkins, often measuring 15 inches across top; flat like a cheese and very productive. It is an excellent keeper and is of the finest flavor. Splendid for the table as well as for stock-feeding, also largely used for canning. The skin is orange red. Pkt., 5c; oz., 15c; ¼ lb., 35c; lb., \$1.00, postpaid.

**Japanese Pie.**—The flesh is very thick, nearly solid, the seed cavity being very small, usually fine-grained, dry, and sweet, having much the same taste and appearance of sweet potatoes. They ripen early, keep well, and produce largely. The seeds are peculiarly marked and sculptured in Japanese characters. Pkt., 10c; oz., 20c; ¼ lb., 50c; lb., \$1.50, postpaid.

**Cushaw.**—A prolific variety; large size, frequently weighing 60 pounds and over; color, white striped and mottled with green. Pkt., 10c; oz., 20c; ¼ lb., 60c; lb., \$2.25.

**New England Pie.**—This variety is small, but of most excellent quality for pies. The fruits are deep orange, 8 to 10 inches in diameter, round or somewhat flattened and slightly ribbed. The flesh is rich deep yellow, fine-grained and very sweet. Pkt., 8c, 2 for 15c; oz., 15c; 2 ozs., 25c; ¼ lb., 40c; lb., \$1.50.

**Large Yellow.**—The Pumpkin most extensively used for feeding stock; also used for making pies. It grows to a large size and varies in shape from nearly round or slightly flattened to quite long. Flesh deep, rich yellow, fine-grained, and highly flavored. This variety is often planted with corn. It is known also as Field Pumpkin. (Crop failed.)

**Mammoth Tours.**—A French variety, which grows to an immense size, often weighing over 100 pounds. Fruit is either long or round, but generally flattened at both ends; skin pale green; marked with deeper bands and marbling. Pkt., 5c; oz., 15c; ¼ lb., 50c; ½ lb., 80c; lb., \$1.50, postpaid.



Sweet Cheese, or Kentucky Field.

**Connecticut Field.**—One of the best for field culture; can be grown with corn. Is largely used for stock-feeding. A deep rich yellow color. Pkt., 10c; oz., 15c; ¼ lb., 35c; lb., \$1.00.

**Mixed Pumpkin Seed.**—All varieties mixed. Pkt., 5c; oz., 15c; ¼ lb., 30c; lb., 90c, postpaid.

## NORTHERN-GROWN SEED POTATOES.



Red River Ohio.

**Irish Cobbler.**—This is a most excellent early variety, maturing good size tubers seven weeks from the time of planting. It has also the remarkable characteristic of producing very few, if any, small potatoes, all the tubers being of marketable size. The vines make short, upright growth, so that the hills may be only a short distance apart. Skin is clear and smooth; flesh is pure white and excellent quality, always cooking mealy.

**Early Rose.**—A very great improvement on the old-time Early Rose. It is a long, red potato, about ten days later than the Triumph. Does better on poor land than most sorts on the market.

**Bliss' Triumph.**—The earliest Potato in existence. A handsome variety and is wonderfully productive. The tubers are not large, but are of a fine medium size for early use, round as a ball, and a beautiful color. For several years it has been the most popular variety in the South. Not desirable for main crop.

**Early Ohio (Red River Stock).**—Especial attention is called to this strain of Ohios for market purposes. Of good average size, strictly pure, smooth, and free from scab and rot, and outyields other early sorts. It is an especial favorite with marketmen, and the most profitable Potato they can grow. Excellent keepers.

**Burbank.**—A very good late variety, fully a month later than the Triumph. It sets heavily and yields a big crop on good land. We do not recommend the planting of this variety on poor soil. We have the genuine seed, procured from a most responsible grower.

On account of market fluctuations, we are unable to name exact prices. We shall be pleased to have you write during the month of January or later and we will then quote prices for prompt or future shipment.

Our Seed Potatoes are hand-picked, high-grade, Northern-grown stock, true to name. Every potato-grower knows that Northern seed is absolutely necessary to plant in this climate to insure early maturity and increased yield.

**Culture.**—To secure best results in growing Potatoes, it is necessary to plant as early as the ground can be made ready. Use a rich soil, and plant in rows 3 feet apart and the sets 1 foot apart in the rows. A complete Potato fertilizer sown into the rows will aid in harvesting the crop at an earlier date, and usually shows an increased yield. Some growers who wish to harvest a very early crop sprout the potatoes before planting by cutting the potatoes into pieces of desirable size and placing them in a warm, light room for three or four weeks before planting in the open ground. If weather is favorable, the shoots will start out strong and vigorous, and as soon as the plants have sent out roots they grow more rapidly than freshly cut potatoes. Most growers use from 8 to 9 bushels of potatoes to the acre when planting in 3-foot rows.

## SWEET POTATO SEEDS AND PLANTS.

**Southern Queen.**—Very similar to the former, but smoother, the tubers having no veins, or very few. Write for special prices when ready to buy.

**California Yam.**—Earliest variety; very productive, yielding as many as three hundred barrels per acre on alluvial land. Skin dull white or yellow; flesh white, dry and mealy. Write for special prices when ready to buy.

**Pumpkin Yam.**—Excellent in quality and productiveness. Skin and flesh yellow and sweet. Best for home use. Write for special prices when ready to buy.

**Sweet Potato Plants.**—Early Jersey, Nancy Hall, Red Brazilian, Yellow Yam, Porto Rico, White Brazilian, Yellow Jersey, Red Nansemond, Yellow Nansemond, Southern Queen, Red Jersey, and Early Golden.

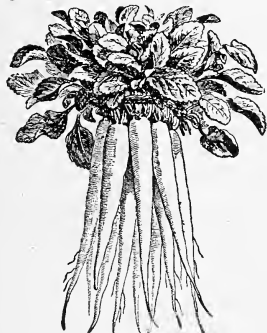


Irish Cobbler.

## RADISH.

6 ozs. of seed will plant 100 yards of row; 6 lbs. to the acre.

**Culture.**—Sow in ground well enriched with rotted manure. Quality depends on quickness of growth. The proper temperature is 40 to 65 degrees. Good ventilation is necessary, if grown under glass. Sow seed  $\frac{1}{2}$  inch deep in the early spring, in rows 12 to 18 inches apart; for a succession, sow every 7 to 10 days. Cultivate frequently. One ounce to 100 feet of drill or 8 to 10 pounds per acre. Thin to 1 inch apart for small varieties and 3 to 4 inches for the large varieties. Radishes will mature in from 3 to 5 weeks.



Icicle.

## THE NEW PONDEROSA.

Splendid—Prodigious.

**The New Ponderosa.**—(18 days.) Combines extreme earliness with colossal size. Stock extremely hardy for first outdoor planting, and last of February is not too early to sow this one. Flesh firm, juicy, and tender. Double the size of any of the early turnip-shaped type. This variety develops to 5 and often 6 inches in circumference, weighing up to 1 ounce per bulb, or about four times the weight of similar sorts; but, notwithstanding its immense size, does not get hollow or pithy; the flesh remaining sparkling white, solid, crisp, and juicy and of the mildest flavor. The shape of the roots varies between round and almost oval, but the bright deep crimson of the skin remains quite constant. Excellent both for forcing and open-ground culture. Pkt., 10c; oz., 20c;  $\frac{1}{4}$  lb., 75c; lb., \$2.00, postpaid.

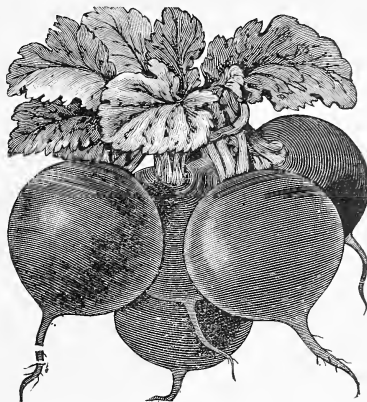
**White Strasburg.**—(30 days.) Of handsome, oblong, tapering shape. Both skin and flesh are pure white. The flesh is firm, brittle, and tender, and possesses the most desirable character of retaining crispness even when old and large. Excellent for summer use, and withstands severe heat and grows very quickly. Pkt., 10c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.25, postpaid.

**Marlow's Scarlet Globe.**—Twenty days to maturity. A small-leaved variety, well adapted to forcing under glass; root round and carmine colored; early; very attractive and desirable; fine for forcing. Pkt., 10c; oz., 20c;  $\frac{1}{4}$  lb., 60c; lb., \$2.00.

**Sparkler.**—A splendid Radish of the same type as the Scarlet Turnip White Tip, but larger and showing more white, practically the whole lower portion being white and the upper part deep scarlet. This Radish is not only very showy, but of the very finest quality, and is sure to become popular with private gardeners as well as growers for the market. Pkt., 10c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.25, postpaid.

**Market Gardeners' Long Scarlet.**—(35 days.) A variety more largely used perhaps than any other for outdoor planting. Growing 6 to 8 inches in length, and possessing all the qualities of a fine Radish. Pkt., 5c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.25, postpaid.

**Icicle.**—(30 days.) The finest, most delicate, and tenderest of pure white Radishes. About 6 inches in length, clear transparent white, crisp, and tender; very attractive on the table and also for the market; ready to pull three weeks after sowing; may be sown as early in spring as soil can be prepared. Remains tender and free from pith for longer period than any other sorts; attractive in appearance and extremely early. Pkt., 10c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.25, postpaid.



Marlow's Scarlet Globe.

**Long White Vienna, or Lady Finger.**—(25 days.) One of the finest and most popular of the long Radishes, growing 6 to 8 inches in length, beautiful in shape; skin and flesh pure white. Pkt., 10c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.25, postpaid.

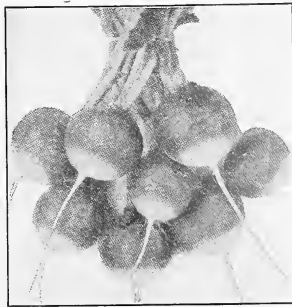
**French Breakfast.**—(25 days.) A small, handsome variety of very quick growth;  $\frac{1}{2}$  inch in diameter and 2 inches long. Pkt., 10c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.25, postpaid.

**Extra Early Scarlet Turnip.**—(20 days.) A small, round, red, turnip-shaped Radish, with a small top of very quick growth. A very early variety, deserving of very general cultivation on account of its crisp and tender qualities. Pkt., 5c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.25, postpaid.

**Early Scarlet Turnip, White-Tipped.**—(18 days.) A beautiful variety, deep scarlet with white tip. It is very ornamental for table use and is becoming very popular as a market variety. It is of the same size and shape as the Scarlet Turnip variety. Pkt., 5c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.25, postpaid.

**Half-Long Deep Scarlet.**—(25 days.) Same form as Long Scarlet, but only half as long. Pkt., 5c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.25, postpaid.

WINTER RADISHES.	Pkt.	Oz.	$\frac{1}{4}$ Lb.
Long White Spanish	5c	20c	50c
Long Black Spanish	5c	20c	50c
Round Black Spanish	5c	20c	50c
Rose China	5c	20c	50c
California Mammoth White	5c	20c	50c
Rose Turnip Radish	5c	20c	50c
Chartier	5c	20c	50c

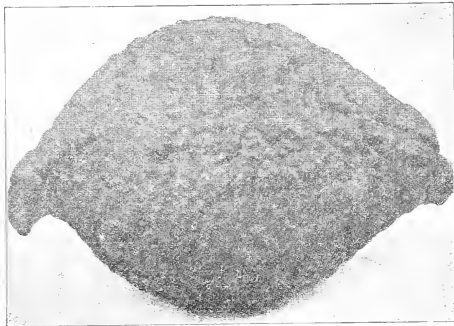


White-Tipped Early Scarlet Turnip.

## SQUASH.

1 ounce of early varieties will plant about 40 hills; 1 ounce of late varieties will plant about 20 hills; 3 to 4 pounds to acre.

**Culture.**—About the same as Melons. Make the ground very rich. A good sandy loam is best. The Squashes are all tender, and the seed should not be planted until warm weather. Allow 4x4 feet for the hills for the bush Squashes and 8x8 feet or more for the running varieties. Four plants to the hill; 3 to 4 pounds of seed to the acre. For summer Squashes estimate 2 ounces to 100 hills; for winter Squashes, 4 ounces to 100 hills.



Warty Hubbard Squash.

## SUMMER VARIETIES.

**Mammoth White Bush Scallop.**—This variety is about twice the size of the White Bush Scallop and much whiter and handsomer. Pkt., 5c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.40, postpaid.

**Golden Summer Crookneck.**—This variety of Summer Crookneck, we find, grows twice as large as the common sort, averaging from 5 to 6 pounds in weight. Pkt., 5c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.50, postpaid.

**The Grand Squash, Delicia Hubbard.**—A culinary joy. A Delicia pie or baked Delicia is a very toothsome morsel. Pkt., 10c; oz., 20c;  $\frac{1}{4}$  lb., 60c; lb., \$2.00.

## WINTER VARIETIES.

**Warty Hubbard Squash.**—This variety is a great favorite with the marketmen. It is very striking in appearance and has been selected for years from exceptionally large specimens. It crops heavily. Our crop last season was at the rate of ten tons per acre. It grows to nearly double the average size of the common Hubbard. Our strain was obtained from a market gardener famous for his warty Hubbards. It sells in the market better than those having smooth shells. Pkt., 10c; oz., 20c;  $\frac{1}{4}$  lb., 45c; lb., \$1.50, postpaid.

**Large Winter Crookneck.**—Standard sort; best keeper; coarse-grained. Pkt., 5c; oz., 15c;  $\frac{1}{4}$  lb., 50c; lb., \$1.75, postpaid.

**Fordhook.**—Fine grain; very sweet and productive; can be used at any time of their growth; skin very thin; good keeper. Pkt., 10c; oz., 20c;  $\frac{1}{4}$  lb., 45c; lb., \$1.60, postpaid.

## SALSIFY, OR VEGETABLE OYSTER.

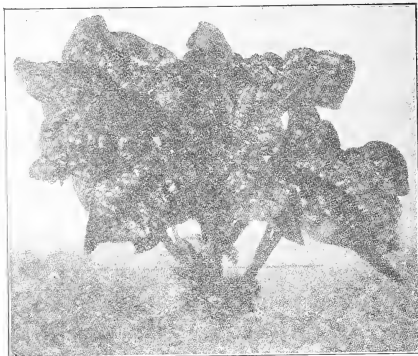
**Culture.**—Soil and culture should be the same as for Parsnips, taking pains to make sowings as early as practicable each spring. Salsify is boiled like parsnips or carrots, or is half-boiled and grated, then made into balls which are dipped into batter and fried like oysters. Sow in drills about 18 inches apart, and thin the plants to 3 inches in the row.

**Mammoth Sandwich Island.**—A new and improved type, producing roots of nearly double the size and weight of the old sort, and in every way preferable. Much valued by market gardeners, as it grows stronger and is less inclined to branch. Pkt., 10c; oz., 25c;  $\frac{1}{4}$  lb., 75c; lb., \$2.50.

## SPINACH.

1 ounce will sow 150 feet of drill; 1 to  $1\frac{1}{2}$  pounds to the acre.

**Culture.**—For early spring use, sow seed in August or September in rich soil. Upon approach of cold weather, cover the plants with 3 inches of straw or soft hay. In the spring, when dry, remove litter and plants will be ready for use in a short time. Sow seed 1 inch deep in rows 1 foot apart or broadcast. For a succulent, sow every two weeks from April to June. Use 1 ounce to 100 feet of drill, 8 to 10 pounds per acre in drills, 15 to 18 pounds broadcast.



Savoy-Leaved.

No plant makes more palatable and nutritious greens than Spinach when properly prepared.

**Giant Thick-Leaved.**—An early variety; very hardy and of good quality. Large, round leaves, nearly smooth, of dark green color; favorite with market gardeners. Pkt., 5c; oz., 10c;  $\frac{1}{4}$  lb., 25c; lb., 85c.

**Victoria.**—Large, very dark green leaves, slightly crimped. Remains in good condition for market for a long time. A newer variety that is becoming very popular with the truckers. Planted extensively in the South. Pkt., 5c; oz., 10c;  $\frac{1}{4}$  lb., 25c; lb., 85c.

**Long-Standing.**—Leaves dark green and thick. Not inclined to run to seed for a long time. Popular with market gardeners. Pkt., 5c; oz., 10c;  $\frac{1}{4}$  lb., 25c; lb., 85c.

**Prickly Winter.**—Use for fall sowing, as it is extremely hardy. Seeds prickly, leaves not so large as those of other varieties. Pkt., 5c; oz., 10c;  $\frac{1}{4}$  lb., 25c; lb., 85c.

**Bloomdale, or Savoy-Leaved.**—Of upright growth; leaves curled and crimped, thick and fleshy. Keeps well after cutting. Suitable for fall sowing. Pkt., 5c; oz., 10c;  $\frac{1}{4}$  lb., 25c; lb., 85c.

**New Zealand.**—A different type of Spinach, suitable for use during the hot weather. Plants grow to a large size, producing an abundance of leaves, tender and of good quality. Pkt., 5c; oz., 10c;  $\frac{1}{4}$  lb., 25c; lb., 85c.

## RHUBARB, OR PIE PLANT.

**Culture.**—This is of hardy growth everywhere, and one of the first sauce and pie plants of early spring. It is sown either from seeds or propagation of the roots. The soil for Rhubarb should be made extremely rich, using manure every other season. The seed should be sown early in the spring in rows 12 inches apart and 1 inch deep. Thin the plants out to stand 6 inches apart, and cultivate throughout the summer. In this section of the Southwest the plants get large enough to use in the fall from seed sown the previous spring. The roots should be planted 3 feet apart in the row and with the crown about 4 inches under the soil. One ounce of seed will sow 100 feet of drill.

**Queen Victoria.**—This is one of the newer varieties, and in some locations is very popular, being a bright pink. A splendid variety. Pkt., 5c; oz., 20c;  $\frac{1}{4}$  lb., 50c; lb., \$1.75, postpaid.

**Linnæus.**—Large and tender. The very finest of all. Pkt., 5c; oz., 20c;  $\frac{1}{4}$  lb., 50c; lb., \$1.75, postpaid.

## RHUBARB ROOTS.

10c each, \$1.00 per dozen, by mail, postpaid.

## TURNIP.

The value of Turnips and Rutabagas for feeding stock in fall and winter is not fully appreciated, as they are much liked by all kinds of stock and serve to keep them in good condition. They should not be fed, however, in large quantities to milk cows, or the flavor of the milk will be disagreeably affected. We recommend that farmers increase their sowings largely, for we are sure the crop will prove remunerative for stock-feeding, as well as for table use when the roots are comparatively small.

Both of these wholesome vegetables are very easily affected in their form and flavor by soil, climate, and mode of culture. The Turnip plant is distinguished from the Rutabaga by its rougher leaves, the root usually matures earlier and is smoother.

For summer use, sow early in spring in light rich or new soil, in drills  $1\frac{1}{2}$  to 2 feet apart, according to the size of the variety, and cover  $\frac{1}{2}$  inch deep, or sow broadcast, but in either case be sure to have the ground rich and freshly stirred. Thin early and keep free from weeds, so that the young plants will not be checked in growth. Any over-crowding will result in tough and poorly flavored roots. It is important to get the spring and summer crop started very early, so that the turnips may have time to grow to sufficient size before hot weather causes them to become tough and bitter.

In the Middle and Western States, sow for fall and main crop from the middle of June to the first of August and in the manner given for spring sowing. In the field, turnips are often sown broadcast, though in most cases better results are obtained by drill culture; good results from broadcast sowing are often obtained on new and burned-over land where the weeds are not likely to be troublesome.

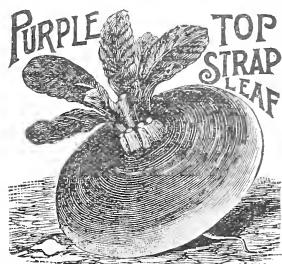
1 ounce will sow 150 feet of drill; 1 to  $1\frac{1}{2}$  pounds to the acre.

**Extra Early Purple Top Milan.**—(45 days.) The earliest in cultivation, two weeks earlier than Purple Top Strap Leaf. Bulb is flat, of medium size, quite smooth, with a purple top; flesh white, hard, and of finest quality. It is an extra good keeper. Pkt., 10c; oz., 20c;  $\frac{1}{4}$  lb., 50c; lb., \$1.50, postpaid.

**Pomeranian White Globe.**—(65 days.) One of the most productive kinds, and in good rich soil roots will frequently grow to 12 pounds in weight. It is globe-shaped, or slightly flattened; skin very white and smooth; used for stock-feeding; also good for table use if pulled when the roots are not more than 4 to 5 inches in diameter. When the winters are mild, the tops are used for greens. Pkt., 10c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.00.

**Purple Top White Globe.**—(65 days.) Large size, rapid growth, unusually attractive, and admired by all. A very much heavier producer than any of the preceding. We confidently recommend it. No sort is its superior. Will produce more tons to the acre than any other sort. Pkt., 10c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.00.

**Cow-Horn.**—Is without question a delicate and good flavored sort, and grows in favor both in the market and family garden. A distinct feature is its rapid growth. This variety is pure white, except a dash of green at the crown, and in shape is



like the carrot and generally crooked, hence its name. Pkt., 10c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.00, postpaid.

**Extra Early White Milan.**—(45 days.) Very similar to the preceding, except the skin is pure white, thus making it especially desirable for forcing. Pkt., 10c; oz., 20c;  $\frac{1}{4}$  lb., 50c; lb., \$1.50, postpaid.

**Early Flat Dutch, or White Strap Leaved.**—(50 days.) A standard variety; good size; pure white; small top, with but few leaves; very sweet. Pkt., 10c; oz., 20c;  $\frac{1}{4}$  lb., 50c; lb., \$1.50, postpaid.

**Purple Top (Strap Leaved).**—(55 days.) The standard for this part of the country. Superior for early or late planting. Round, flat, good-sized, small top, with but few leaves. Flesh very fine-grained; flavor good. Pkt., 10c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.00, postpaid.

**Orange Jelly, or Golden Ball.**—A distinct variety, one of the most delicately flavored of the yellow-fleshed Turnips. The tops are small. The roots are medium-sized, round, very smooth, and with deeper yellow skin than most of this class. The flesh is firm, crisp, and of most excellent quality. The roots are in best condition for table use when about 3 inches in diameter. This variety is of quick growth, adapted to spring as well as fall planting, and keeps exceptionally well. Known also as Robertson's Golden Ball. Pkt., 10c; oz., 20c;  $\frac{1}{4}$  lb., 50c; lb., \$1.50.

**Yellow Globe.**—A round, smooth, light yellow Turnip of medium size. The flesh is crisp, firm, and of very good quality for the table or for stock-feeding. The roots are in best condition for table use when 3 to 4 inches in diameter. This sort keeps well and is a good cropper. Pkt., 10c; oz., 20c;  $\frac{1}{4}$  lb., 50c; lb., \$1.50.

## RUTABAGAS.

Rutabagas, Swedish or Russian Turnips, are extensively grown for a farm crop. The roots are close-grained, hard, and will endure a considerable degree of cold without injury if preserved in a pit or cellar during the winter. Rutabagas are superior to any other vegetable root grown for cattle, horses, and sheep. The animals thrive and fatten on rutabagas, carrots, and mangels fed in combination with hay.

**American Purple Top.**—A very large, globe-shaped Rutabaga, yellow with purple top. Hardy, vigorous-growing variety; of excellent quality for the table and one of the best for stock feed. Pkt., 10c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.00.

**Skirving's Purple Top.**—An old, well-known variety grows to a large size; very productive and good keeper. Pkt., 10c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.00.

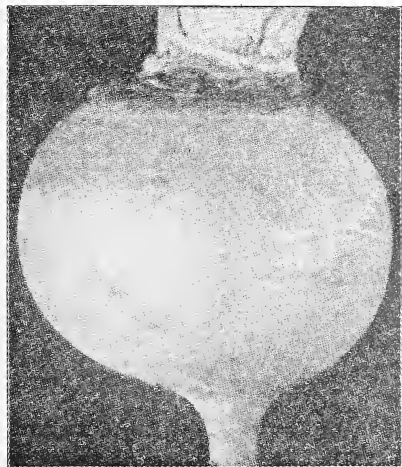
**White Swede, or Russian.**—A large, white, globe-shaped Rutabaga. Flesh fine quality, sweet and tender. Excellent for the table. Can be grown to a large size if wanted for stock feed. Pkt., 10c; oz., 15c;  $\frac{1}{4}$  lb., 40c; lb., \$1.00.

## VEGETABLE PLANTS.

**Early Cabbage Plants.**—For delivery in April and May.

**Sweet Potato Plants.**—All the leading varieties.

**Tomato Plants.**—Good stocky Plants, twice transplanted. Ready in May and June.



Purple Top White Globe.



## TOMATO.

Tomatoes do best on light, warm, not over-rich soil, and success depends largely upon securing a rapid, vigorous and unchecked growth during the early part of the season. Sow in hot-bed or in shallow boxes in the house from six to eight weeks before they can be set out of doors, which is when danger from frost is past; when the plants have four leaves, transplant into shallow boxes or cold-frames, setting them 4 or 5 inches apart; give plenty of air and endeavor to secure a vigorous but steady and healthy growth, so that at the time of setting in the open ground they will be strong and stocky. Even a slight check while the plants are small will materially diminish their productiveness.

Set out of doors as soon as danger from frost is over, but before doing so harden off the plants by gradually exposing them to the night air and by the withdrawal of water until the wood becomes hard and the leaves thick and of a dark green color. Transplant carefully and cultivate well as long as the vines will permit. If to be grown without training, the plants are usually set from 3 to 4 feet apart each way, according to the vigor of the variety.

To insure best results in respect to early ripening, as well as the amount and perfection of fruit, it is advisable to train up and trim the vines, especially if the patch is rather small. When the plants have been properly started and are 6 to 10 inches high, they will begin to throw out branches. Select the largest and most vigorous of these and pinch off all others except this one and the main stem. Care must be exercised not to pinch off a dark green color. Transplant carefully and cultivate well as long as the vines will permit. If to be grown without training, the plants are usually set from 3 to 4 feet apart each way, according to the vigor of the variety.

Fruit will set to almost any height desired if all side branches are kept trimmed off at intervals of a week. By such a method of training and trimming the fruits are kept clear from the ground and with free access of sunlight they ripen much earlier; the vitality, otherwise exhausted in superfluous branches and leaves, is utilized in forming fruits of largest size, greatest perfection of shape and best quality. For cultural directions, see books listed or inside of back cover.

All our Tomato seeds are from seed stocks carefully selected and saved by ourselves. We challenge comparison of our stocks with any offered.

**Culture.**—This vegetable, under proper cultivation, is wonderfully productive both as to quantity and quality. In this section of the country it is more largely used in canning than any other vegetable, and should have a place in every garden. One ounce of seed will produce 1,000 plants. For early use, sow in February or March in hot-beds or boxes, which should be placed near a window. When the seedlings are 2 or 3 inches high, transplant into 2 or 3-inch pots or in rows 4 or 5 inches apart, keeping the temperature about 60 degrees. Subsequent transplanting will make the plants strong and hardy. Do not set them in the open ground until all danger of frost is over.



**Beautifol, Improved Strain.**—This has been a standard variety for many years, and is still the favorite main crop Tomato with our market gardeners. Medium early, round, very uniform in shape. Skin smooth, crimson with purplish tinge. Flesh solid and of excellent flavor. A splendid Tomato for either the home garden or for shipping. Pkt., 5c; oz., 20c;  $\frac{1}{4}$  lb., 60c; lb., \$2.25.

**The New Stone.**—The Tomato for the main crop. Choice seed. We call this the king of the Livingston kinds, which are the best types of large, smooth, solid "beefy" Tomatoes. If asked to select one main crop market sort, we advise this. Color fine scarlet, stem set high, core small and shallow, so that little is lost when it is taken out of the fruit before slicing. We want to make what we say of this variety definite, because there are very many good kinds and a long list is confusing. If in doubt, buy the New Stone for market or home use. Pkt., 5c; oz., 30c;  $\frac{1}{4}$  lb., 80c, postpaid.

**Dwarf Stone.**—(100 days.) Fruit like Improved Stone. The strong upright growth allows very close planting. The plants may be set 18 by 24 inches apart and yet produce an abundant crop. Pkt., 10c;  $\frac{1}{2}$  oz., 25c; oz., 40c;  $\frac{1}{4}$  lb., \$1.35.

**Chalk's Early Jewel.**—(100 days.) A fine second-early Tomato, about ten days later than Earliana. Fruit large size and fine flavor. Plants are compact and strong. One of the best for shipping and the home garden. Continues bearing all the summer. Pkt., 10c;  $\frac{1}{2}$  oz., 20c; oz., 35c;  $\frac{1}{4}$  lb., \$1.00.

**Matchless.**—(100 days.) A large, bright-red Tomato, which has become very popular in the East. The fruit is large, very smooth and symmetrical, ripening well to the stem. The flesh is of a bright rich red color and of fine quality. Pkt., 5c;  $\frac{1}{2}$  oz., 20c; oz., 35c;  $\frac{1}{4}$  lb., \$1.00.

**Truckers' Favorite.**—(90 days.) A purple-fruited sort of excellent quality, uniformly good size, maintained until late fall. Fruits are invariably smooth, solid, and flesh is of finest color. Unexcelled for slicing or cooking. Plants are very thrifty, free from rust or blight, and bear until killed by frost. Pkt., 5c;  $\frac{1}{2}$  oz., 20c; oz., 30c;  $\frac{1}{4}$  lb., \$1.00, postpaid.

**Acme.**—(100 days.) An old-time popular variety, having at all times given entire satisfaction. Round, smooth, purple. Pkt., 5c;  $\frac{1}{2}$  oz., 20c; oz., 30c;  $\frac{1}{4}$  lb., \$1.00, postpaid.

**Improved Trophy.**—(100 days.) Our Improved Trophy is a sort whose large, vigorous and productive, solid, smooth, fine flavored fruit will satisfy the exacting. Liked for canning as well as fresh. Pkt., 5c;  $\frac{1}{2}$  oz., 15c; oz., 25c;  $\frac{1}{4}$  lb., 90c, postpaid.

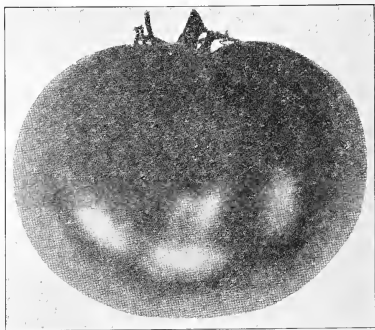
**John Baer.**—The largest fruited, smoothest, and finest in quality of the extra early Tomatoes. Vines short, vigorous, and enormously productive. They ripen a much larger crop in the early part of the fruiting season than any other extra early variety. Fruits globular, unusually uniform, and smooth; free from wrinkled, cracked fruits. The color is a beautiful bright scarlet. The fruits have no hard core; small seed cells, and are practically all solid meat of mild and sweet flavor. Pkt., 10c;  $\frac{1}{2}$  oz., 25c; oz., 40c;  $\frac{1}{4}$  lb., \$1.25, postpaid.

**Early Detroit.**—This splendid variety is the largest and best of the early purplish-pink Tomatoes. The vines are vigorous and very productive. The fruits are very smooth, uniform in size, nearly globe-shaped, firm, and of excellent quality. Early Detroit is one of the most valuable shipping Tomatoes desirable for the home garden and near markets. Pkt., 10c;  $\frac{1}{2}$  oz., 20c; oz., 35c;  $\frac{1}{4}$  lb., \$1.00, postpaid.

**Kansas Standard Tomato.**—One of the best tree Tomatoes grown. Pkt., 10c;  $\frac{1}{2}$  oz., 25c; oz., 40c;  $\frac{1}{4}$  lb., \$1.25.

**Sparks' Earliana.**—(90 days.) Fruit of large size, handsome shape and color; in solidity and quality equal to any; has proven very remunerative to growers for market; grows in clusters of five to eight fruits; ripens clear to the stem, and does not crack. Pkt., 10c;  $\frac{1}{2}$  oz., 25c; oz., 40c;  $\frac{1}{4}$  lb., \$1.00, postpaid.

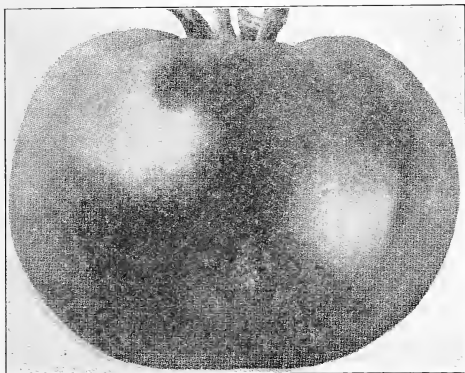
**Favorite (Livingston's).**—Ripens evenly and early; very prolific; good flavor; few seeds; flesh sound. Pkt., 5c;  $\frac{1}{2}$  oz., 20c; oz., 30c;  $\frac{1}{4}$  lb., 90c, postpaid.



John Baer.



## TOMATO.



Marlow's Perfection.

**Bonny Best.**—An early and productive variety. Fruits are round, somewhat flattened at stem end, and are produced in abundance. The color is scarlet, and it is a good forcing Tomato. Pkt., 10c;  $\frac{1}{2}$  oz., 20c; oz., 35c;  $\frac{1}{4}$  lb., \$1.00.

**Perfection (Marlow's).**—Larger than the Acme; color, blood red; it is one of the first to ripen; almost round in shape, perfectly smooth, and very solid; of the best quality; enormously productive. Pkt., 10c;  $\frac{1}{2}$  oz., 25c; oz., 40c;  $\frac{1}{4}$  lb., \$1.25, postpaid.

**Livingston's Coreless.**—Immensely productive; almost round. The strong outside and inner wall of flesh of the Livingston Coreless render it very firm and one of the best for shipping. Color, bright red. Pkt., 10c;  $\frac{1}{2}$  oz., 25c; oz., 40c;  $\frac{1}{4}$  lb., \$1.50.

**Dwarf Champion.**—(90 days.) Dwarf and compact in habit, the plant growing stiff and upright, with very thick and short-jointed stems, requiring no stakes. Often sold as Tree Tomato. Can be planted as close as 3 feet. Unsurpassed as a cropper. Color, deep red, with a purplish tinge; round and smooth. Pkt., 10c;  $\frac{1}{2}$  oz., 25c; oz., 40c;  $\frac{1}{4}$  lb., \$1.35.

**Golden Queen (Queen of the Yellows).**—(100 days.) Solid, smooth, large in size, and ripens early. Makes a handsome, rich preserve. This Tomato should be grown in every home garden. Its flavor is better and more delicate than that of the red varieties, the flesh finer-grained, and very tender. Try it. Pkt., 10c;  $\frac{1}{2}$  oz., 25c; oz., 45c;  $\frac{1}{4}$  lb., \$1.25.

**Crine's June Pink.**—(90 days.) A purple-pink selection from Earliana. The fruit is smooth and the plant a good yielder. Pkt., 5c;  $\frac{1}{2}$  oz., 20c; oz., 35c;  $\frac{1}{4}$  lb., \$1.25.

**Ponderosa.**—(120 days.) Purplish-pink Tomato of the largest size. Very meaty, few seeds, and free from acid. Ripens mid-season. Pkt., 10c;  $\frac{1}{2}$  oz., 35c; oz., 55c;  $\frac{1}{4}$  lb., \$2.00.

**Early Sunrise.**—(85 days.) One of the earliest and best all-purpose Tomatoes ever offered. Handsome in shape, smooth, free from cracks or ridges. The meat is solid, and few seeds. For home use or market purposes, this early Tomato cannot be equaled. Its fruits are large and uniform in size and very attractive on account of their beautiful bright-red color. The vines are very hardy, desirable for early planting. We want every customer to grow some of the Early Sunrise Tomatoes this season. Pkt., 10c;  $\frac{1}{2}$  oz., 25c; oz., 40c;  $\frac{1}{4}$  lb., \$1.50.

**Coreless.**—This is a very large, uniformly globe-shaped, bright scarlet, late-maturing Tomato. The fruits are very solid, almost entirely free from green core and with little or no depression



New Stone.

at stem end, making the variety desirable for slicing, canning, and shipping. The vines are very vigorous, blight-resistant, and productive. Pkt., 8c, 2 for 15c; oz., 45c; 2 ozs., 80c;  $\frac{1}{4}$  lb., \$1.25; lb., \$4.50.

**Peach.**—Desirable for preserving or for table decoration. The fruits resemble a peach in shape and size and the color, a light terra cotta red with a delicate bloom. The flesh is tender and of good flavor. Pkt., 8c, 2 for 15c; oz., 40c; 2 ozs., 75c;  $\frac{1}{4}$  lb., \$1.10; lb., \$4.00.

**Dwarf Champion.**—This is sometimes sold as the "Tree Tomato." It is a second early or main crop, purplish pink variety, especially desirable where garden space is limited. The vines are about 2 feet high, vigorous, upright, and compact. The fruits are medium-size, exceptionally smooth, and of very good quality. Our stock is a very superior strain with more even, smoother fruit than the original. Pkt., 8c, 2 for 15c; oz., 50c; 2 oz., 85c;  $\frac{1}{4}$  lb., \$1.40; lb., \$5.00.

## SMALL-FRUITED TOMATOES.

These are very delicious for preserving. The vines are immensely productive.

**Red Pear.**—Used for preserves and to make "tomato figs." Fruits bright red, distinctly pear-shaped and of excellent flavor. Our stock is the true small pear-shaped. Pkt., 8c, 2 for 15c; oz., 40c; 2 oz., 75c;  $\frac{1}{4}$  lb., \$1.10; lb., \$4.00.

**Yellow Pear.**—Fruits similar to the Red Pear, but of rich, clear, yellow color, and quite distinct from the variety sometimes sold under this name. Pkt., 8c, 2 for 15c; oz., 40c; 2 ozs., 75c;  $\frac{1}{4}$  lb., \$1.10; lb., \$4.00.

**Yellow Plum.**—Fruits plum-shaped, of clear, deep yellow color; flesh yellow and finely flavored. Esteemed for preserves. Pkt., 8c, 2 for 15c; oz., 40c; 2 ozs., 75c;  $\frac{1}{4}$  lb., \$1.10; lb., \$4.00.

**Red Cherry.**—Fruits small, about  $\frac{3}{4}$  inch in diameter, perfectly round and smooth. Fine for pickles and preserves. Pkt., 8c, 2 for 15c; oz., 40c; 2 ozs., 75c;  $\frac{1}{4}$  lb., \$1.10; lb., \$4.00.

**Yellow Cherry.**—This variety differs from Red Cherry in color only. Pkt., 8c, 2 for 15c; oz., 40c; 2 ozs., 75c;  $\frac{1}{4}$  lb., \$1.10; lb., \$4.00.

**Yellow Husk, or Ground Cherry.**—Very sweet, mild flavor; used for preserves. Vines low and spreading. Fruits small, about  $\frac{1}{2}$  inch in diameter, enclosed in a loose husk. The seed we offer is that of the true Yellow Ground Cherry. Pkt., 8c, 2 for 15c; oz., 35c; 2 ozs., 60c;  $\frac{1}{4}$  lb., \$1.10; lb., \$3.50.

# A Better Balanced Agriculture for Kansas

By W. M. JARDINE.  
President Kansas State Agricultural  
College.

Delivered before the Wheat Congress.

In connection with a better balanced agriculture for Kansas, it will be to the point to take a survey of the statistics of Kansas crops for the last ten years. The area planted to wheat has steadily risen from seven and one-fourth million acres for the crop of 1911 to more than nine million acres for 1919. If last spring's promise of a two-hundred-million-bushel wheat production for Kansas had held out, it would have established a record over which Kansas would long have exulted, but it would undoubtedly have proved an expensive record. The rain-laden winds that curtailed this year's wheat crop may be regarded as the proverbial ill winds that blow somebody good, for as surely as the average yield had been fair on all of the eleven and a half million acres in wheat, Kansas farmers would have been tempted to continue the unbalanced cereal crop acreages obtaining this year.

## Corn.

Corn has taken a direction opposite to wheat. The area of more than 8½ million acres in 1910 was reduced until in 1915 only 4½ million acres were planted. Following the excellent yields of that year as a result of the unusual precipitation continuing through the season, the acreage rose until in 1917, when more than nine million acres were planted to corn. The yield was disappointing and next year the average was reduced to a little more than six million acres, and last year to not much more than four million acres.

## Oats.

Oats has just about held its own during the decade, with the exception of 1917, when wheat winter-killed badly and a considerable acreage was plowed up and planted to spring crops. Three times in the ten years, however, in 1911, 1917, and 1918, the acreage went over the two million mark. Last year the area planted to oats is only a little more than one and a half million acres.

## Barley.

The acreage of barley increased from the beginning of the war until 1917, when the record area of more than \$50,000 acres was planted. The area last year was a little more than 600,000 acres and this year not much more than 500,000 acres.

## Rye.

Rye has increased from 22,000 acres in 1910 to 287,000 acres in 1919.

## Grain Sorghums.

The acreage planted to the grain sorghums has maintained a steady increase on the whole. Nineteen seventeen also marked the maximum acreage to sorghums, the acreage that year passing the two million mark. In 1918 and again last year the area is under two million acres.

## Alfalfa.

Alfalfa has maintained an increase from 925,000 acres in 1910 to more than one and a quarter million acres in 1919.

## What Readjustments?

It is not necessary to urge Kansas farmers to refrain from planting eleven and a half million acres of wheat this fall. The disappointing yield, the expense of handling this year's crop, labor difficulties, and the unfavorable condition of the ground for plowing have brought about a situation in which there is danger that not sufficient ground will be planted to wheat. Six or seven million acres will likely be about the right amount to continue planting each year.

## Less Corn, More Sorghums.

With respect to corn, the 4,190,000 acres to that crop this year could well be increased to 4,500,000 acres. This will be enough, however, to plant any year. Corn is too uncertain with Kansas weather conditions to warrant planting any such acreage as was planted in 1917. We must substitute a crop that is hardy enough to survive the dry spell that can always be expected in Kansas. Fortunately we have a crop in the sorghums that meets this requirement. The sorghums have demonstrated their ability to resist dry weather and produce a supply of feed when other crops fail. The season of 1918 our corn at Manhattan yielded 3½ tons, kafir 7 tons, and sweet sorghum 9 tons of silage per acre. This year they have again been subjected to a severe test and have again proved their worth. On September 1 the condition of the sorghums in Kansas was 24 to 33.1 points higher than the percentage condition of corn, which was reported at 43.8.

The nearly two million acres in sorghums this year should be doubled. Four million acres to sorghums next year will not be too much. They make silage of high feed value. In a three-year feeding test with calves at Manhattan, it was found that the average gain in weight per acre of silage was 1,039 pounds for corn silage, 1,013 pounds for kafir silage, and 1,376 pounds for sweet sorghum silage. Nor is the gain of the sorghums less effective than sorghum silage as feed for live stock. Tests conducted by the Experiment Station show that for all practical purposes a pound of sorghum grains—kafir, fetterita, and milo—is equal in feeding value to one pound of corn.

## Double Alfalfa Acreage.

We should more than double our acreage of alfalfa. As a matter of fact, we should look forward in Kansas to not less than 5,000,000 acres in alfalfa; but of course we should work towards as large an acreage as this in a gradual manner. However, it ought to be possible to have 3,000,000 acres to alfalfa next year.

## More Pasture Crops.

Not less than 1,000,000 acres of our cultivated land should be planted to Sudan grass, sweet clover, and supplementary pasture. The area now in Sudan grass and sweet clover is only a little more than 100,000 acres.

## Present Acreage Correct.

The area planted to oats this year, approximately 1,600,000 acres, is about what should be continued.

## More Barley Sometimes.

When spring conditions in western Kansas are favorable for the sowing of small spring grain, the acreage of barley might well be increased from the half million acres this year to one million acres.

## Rye a Good Crop.

Rye is one of the hardest plants that can be grown and we can well afford to maintain the present acreage of 287,000 acres. It is a valuable crop for pasture. The difficulty with rye is that it re-seeds itself very readily and there is danger of its mixing with wheat unless care is taken.

## Early Preparation of the Seedbed.

Much has been said regarding the importance of preparing the seedbed for wheat at the right time and in the right way, but it is not generally realized what a difference early preparation makes in the amount of plant-food in the soil at planting time and the yield of wheat at harvest time. The increase in the amount of nitrogen in the soil at planting time and the effect produced on the yield of wheat by early seedbed preparation is shown by the following table:

Nitrogen per Acre		per Acre	
Plowed July 7 deep	294 lbs.	25.4 bu.	
Plowed Aug. 7 deep	212 lbs.	23.9 bu.	
Plowed Sept. 7 deep	71 lbs.	16.8 bu.	
Disked July, Plowed			

Sept. 7 deep	192 lbs.	19.7 bu.
Disked at seeding time,		
not plowed	42 lbs.	9.2 bu.

## Effect of Crop Rotation on Yield of Corn.

Corn, 1917		Yield of	
Rotation—			
Corn continuously 8 years	17.6 bu.		

Corn, corn, wheat, 8 years	22.7 bu.
Corn, cowpeas, wheat, 8 years	32.8 bu.
Corn, 2 years, wheat, alfalfa,	
4 years, 8 years	44.9 bu.

## Farmers Sell Soil Fertility.

Kansas farmers sell and ship out of the State their natural soil fertility at the rate of nearly two pounds of nitrogen, phosphorus, and potassium with every bushel of wheat sold. Of this year's wheat crop, approximately 190,000,000 bushels will be shipped out of the State, carrying with it not less than 192,000,000 pounds of nitrogen, phosphorus, and potassium, worth not less than \$85,000,000. This natural soil fertility is forever lost to the State and it is a loss of so much of the principal of Kansas farmers. It is a loss which can not be helped. Not so, however, is the loss of natural soil fertility which comes from failure to utilize the straw that is produced with the wheat crop. In an ordinary year, two pounds of straw are produced with every pound of wheat. At the rate of two pounds of straw for every pound of wheat, however, not less than 9,600,000 tons of wheat straw were produced, containing not less than 284,000,000 pounds of nitrogen, phosphorus, and potassium, worth not less than \$113,000,000. By feeding this straw to live stock and carefully spreading the manure on the land, it would be possible to return to the soil the greater part of the 284,000,000 pounds of fertilizer taken from the soil in the straw.


## FARM SEEDS

**X-SEED-AL BRAND is the TRADE-MARK  
THAT MADE FIELD SEEDS FAMOUS.**

Cheapest and Best in the Long Run.

## RECLEANED

**FIELD SEEDS - GRASS - FORAGE - HAY**

 At the time this Catalog goes to press prices are so unsettled that it is impossible for us to print them.

**Write Us for Prices. - - - Always Buy THE BEST.**

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## SEED CORN.

KANSAS-GROWN SELECTED SEED CORN, HAND-PICKED,  
NUBBED, AND GRADED.

While we have had a poor Corn crop in some sections of the country, we have been able to secure some of excellent quality, and the test shows high germination. We will be able to furnish the following varieties of good quality until our stock is exhausted.

**Improved Golden Beauty.**—(110 days.) We know of no other variety that will give better satisfaction than the big, handsome Golden Beauty. It is the largest-grained Dent Corn in cultivation. Ear is perfect in shape, with ten to fourteen rows of golden yellow grains; cob small, and is sure to please every farmer who grows it. The heaviest cropper we have handled. Prices on application.

**Peid's Yellow Dent.**—(110 days.) Thoroughbred, pedigreed, carefully selected stock. During the past five or six years this variety has come rapidly to the front and now occupies a prominent position in all lists. It is of handsome shape and color, and largely grown for exhibiting at fairs, Corn shows, and is used in many Corn schools as a standard for judging, and is too well known to require lengthy description. We have selected the choicest ears, so that we are sure our seed cannot fail to please the most particular. It is of handsome yellow color, smooth, deep-grained, and the kernels are packed very closely on the cob, thus giving it an appearance of great solidity. Matures in about 115 days. Prices on application.

**Iowa Silver Mine.**—Iowa Silver Mine is standard. It is well and favorably known. It is a remarkable drought-resister, and under adverse conditions seems to pull through and make a crop where other varieties fail. Silver Mine is deep-grained, pure white, rough-topped, with a small white cob. Ears run from 9 to 12 inches long, with sixteen to twenty rows of pure white kernels, solidly set on ears well filled out at butt and tip. This Corn is a drought-resister, maturing in hot climates where early drouths are frequent. Stalks medium height, very leafy, with broad blades, frequently bearing two ears weighing 1 to 1½ pounds each. Iowa Silver Mine has probably taken as many sweepstakes and first premiums as any Corn in existence. Prices on application.

The pure-bred Silver Mine is a safe crop anywhere in the Corn belt and in all the Southern States, including Missouri, Kansas, Oklahoma, Texas, Arkansas, Louisiana, Mississippi, Alabama, Georgia, Tennessee, Kentucky, and Virginia. Matures in 100 days.

**Iowa Gold Mine.**—Is not a large Corn, but the best thing we know of for medium early. We offer the pure strain Gold Mine, and recommend it.

With the expert Corn farmer, Gold Mine is known as medium early—between the 110-day and the extra early sorts that mature in eighty-five days. It is, however, a great producer and sure cropper. Ears are medium and symmetrical. Color, bright golden yellow. The grain is deep and the cob is small; for this reason it dries out quickly, producing sixty-two to sixty-three pounds of shelled corn to seventy pounds of ears. Stalks make excellent silage or fodder. Prices on application.

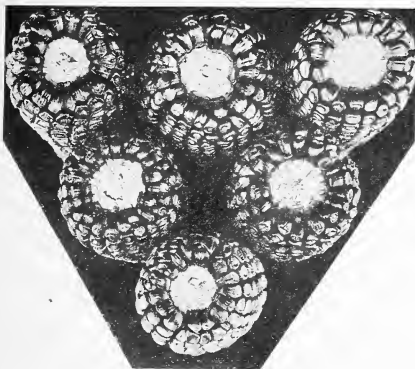
Iowa Gold Mine will grow in nearly every State in the Union, and is specially recommended for the western Corn belt. All throughout the Eastern States, where the climate does not demand an extra early variety, it is very popular. It has been tried all over the South with nothing but the best results. Prices on application.

**Boone County White.**—(110 to 120 days.) A very large white Corn, something like Silver Mine, but larger and later in maturing. It is a native standard variety in Illinois. Boone County is peculiarly suited to all the Southern States, as it ripens earlier than the native Corn and will not be forced ahead too rapidly, owing to its slow-growing tendencies. Ears well filled out at both ends, cylindrical, 9 to 11 inches long, averaging twenty rows, some eighteen and twenty-two. Grain very deep, a little rough. Cobs white, of medium size. Boone County is a show Corn, and has carried off many premiums offered at Corn contests, State and county fairs.

For the southern half of Iowa and localities that do not lie farther north; southern Illinois and Nebraska, Oklahoma, Missouri, eastern Kansas, Texas, Arkansas, Louisiana, Mississippi, Alabama, Georgia, Tennessee, Kentucky, and Virginia. Prices on application.

Improved Golden Beauty.

## SEED CORN—Continued.



**Bloody Butcher.**—Color deep cherry-red with white cap, generally 14 rows of pure red, white-cap corn on a small cob. Long slender ears, 8 to 10 inches. Stalks medium height, fairly heavy, grains always dented and sometimes rough. As White Cap Red Butcher will mature in 90 days, it is planted for husking crop throughout the north Corn belt as far up as St. Paul, Minn. The same conditions exist throughout the Middle West and on east to New York and the New England States. Finds many friends for late planting in Iowa, Illinois, and eastern Nebraska. Great favorite in Missouri, Kansas, Oklahoma, and Texas for early feeding. Matures in 85 to 90 days. Prices on application.

**Hickory King.**—(70 days.) A grand old-time variety, especially fine for milling purposes. The smallest cob, compared with the size of the ear, of any Corn grown. It yields greater, and is unquestionably the most productive white field Corn. A single grain will completely cover the end of the cob when broken in half. It shells and shucks easily, and will make more shelled Corn to a given bulk of ears than any other variety. Prices on application.

**Early June Giant Fodder Corn.**—Unequaled in yield and unsurpassed in quality. A quick grower, tall, short-jointed, producing an abundance of leaves, and rich, juicy, sugary stalk. It is the best milk-producer of all the field ensilage Corns, being almost as sweet and tender as Sugar Corn. Prices on application.

**Improved Leaming.**—(90 days.) This is one of the earliest yellow Dent Corns in cultivation, ripening in from 90 to 100 days from planting, surpassing the Yellow Canada and Flint varieties in earliness, productiveness, and quality. The ears are large and of an orange-yellow color, and small red cob; generally producing two good ears each, and husks and shells very easily. Prices on application.

**Champion White Pearl.**—An extra early pure white variety of the Dent family; very productive and exceedingly heavy, maturing in 85 to 90 days from the time of planting. The grains are extra deep and wide, two of which will more than span the cob, which is small; also largely used for roasting-ears. Prices on application.

**Imperial St. Charles Red-Cob White.**—Pure white Corn with red cob, ears large, moderately rough, deep grain. Stalks grow very leafy and heavy and will produce enormous yields of Corn for husking crop or prove a mortgage-lifter for silage. Being a native of St. Charles County, Missouri, this variety is best adapted to the Southern States for a husking corn and is in great demand in the Eastern and Northern States for ensilage and fodder purposes. Prices on application.

**Longfellow Yellow Flint, 75-Day Corn.**—A variety that is particularly adapted to the North. It's an eight-rowed sort, with ears 10 to 15 inches in length, and about 1½ inches in diameter, small cob, large kernel, and very broad. Prices on application.

**King of the Earliest.**—(90 days.) Kansas-grown. Grains deep golden yellow and large, while the cob is very small. One of the very best of the early varieties and of great value to market gardeners and trucksters. Prices on application.

**Blue and White.**—It is an extremely early variety, maturing in 85 days. Perhaps the most wonderful quality of this Corn is its power to resist drouth, and it does equally as well in wet seasons. Ears large, 10 to 12 inches, and two on every stalk. The kernels are of different colors; blue pin and white, giving the ears a curious beautiful mottled appearance. Prices on application.

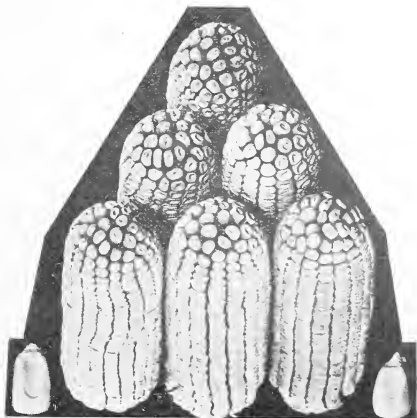
**Squaw Corn.**—This is the old-fashioned Flint Corn that is known by everyone in the country over as Squaw Corn. Matures in 75 days; has two to four large ears to the stalk; kernels blue and white. Especially recommended where an early Corn is needed for early stock-feeding and for ensilage purposes. It can't be beat. Give this Corn a trial, and you will always have Corn. Prices on application.

**Strawberry Corn.**—(100 days.) A good reliable variety, extra large ear, grains red and white striped. Withstands drouth. Prices on application.

**Indian Chief.**—Medium-size ear, deep red grains. Prices on application.

## Grading, Germination, Yield.

You want varieties that will give you big yields. This is the most important of all. What we all aim at is 100 bushels to the acre of shelled Corn; mighty few of us strike it, but we are working that way. In our Seed business we have always put yield ahead of fine points and have tried to send out varieties that will give the farmers big yields. Prices on application.





## WHEAT.

SECURE SEED FROM RELIABLE SOURCES.

One of the serious difficulties encountered by those who wish to grow superior varieties of Wheat is the mixed seed, and seed not true to name, that is offered for sale. Buyers soon become discouraged and rightly conclude that it is better to use their own seed, even though it is poor, than to buy from outside their locality when they can have no assurance of securing pure seed adapted to their conditions. If prospective buyers could be assured of securing seed that is pure and true to name, the demand for the better grades of farm seeds would no doubt be increased.

This will be particularly true of Wheat. No doubt some unscrupulous and careless people sell mixed seed. To prevent this is to buy only from people who have pure seed and whose integrity is above question.

### BLACK HULL WHEAT.

Too much can not be said for this variety of Wheat, as for the last five years it has outyielded all other varieties, and, in time, will be the main variety sowed. In variety tests in two Kansas counties, the Black Hull averaged 34.16 bushels, while the nearest to it—the Kanred—yielded an average of 25.83 bushels. It appears to be both drouth and rust-resistant and has a very stiff straw for a hard Wheat, enabling it to stand up well. Another desirable quality of this Wheat is that it matures and ripens about a week earlier than any other variety, thereby minimizing the chance of its being hailed out or being killed by hot winds and drouth. It is an excellent milling Wheat, containing a large amount of the properties that make an excellent flour. It is the one Wheat for the great Southwest, and we urge that those who want to increase their Wheat yield write us especially about this Wheat. Prices on application.

### KANRED WHEAT.

#### Superiority of the New Variety.

There has been developed at the Kansas Agricultural Experiment Station a new variety of Wheat, which yields from three to five bushels per acre more than either of the two varieties, Turkey and Kharkof, which are most commonly grown in Kansas. The new variety has been named Kanred, derived from the words "Kansas Red." It is a hard red winter Wheat, scarcely distinguishable in appearance from Turkey and Kharkof, but superior to them in winter hardiness, earliness of maturity, resistance to rust, and yield. Kanred ripens earlier than Turkey and Kharkof. The difference is not great, but it has been enough to make considerable difference in the yield.

Experiments so far conducted show that Kanred is more resistant to winter-killing than Turkey and Kharkof. In 1912, Winter Wheat at Manhattan was severely injured in late winter and early spring by freezing. The yield for Kanred in that season was 19.2 bushels per acre, as compared with 13.2 bushels for Turkey, and 11.9 bushels for Kharkof. It is believed that much of this difference was due to the hardness of Kanred. Prices on application.

### MAY REPLACE OTHER WHEAT.

It is said at the Department of Agriculture that Kanred will very likely replace all the Turkey Wheat grown in Kansas and that it also promises well for the dry lands of Oklahoma, Nebraska, and Colorado.

Besides its super-producing qualities, Kanred offers great resistance to black stem rust, and this is probably the chief reason for its greater yield. It is more winter-hardy than the two other varieties and is earlier.

### IMPROVED KHARKOF—STOOLING VARIETY.

Kharkof is the greatest and most wonderful variety of Winter Wheat ever imported, and the demand for this variety has been phenomenal. We have had difficulty in supplying our trade, for our seed met with such favor.

This variety is unequalled for hardness, coming direct from a cold climate, and has also proven itself the heaviest-yielding variety ever obtained. It has been known to yield 75 bushels per acre. The average yield is from 40 to 50 bushels. It sends out more stools from each grain and grows a heavy stiff straw which stands up well and does not lodge on rich ground. This is the most popular variety we have ever offered and our trade increases each year. This fall we want every wheat-grower to ask for samples and prices. Prices on application.

### IMPROVED TURKEY RED.

We have no hesitancy in recommending to you this standard variety. For many years we have been improving it by careful selecting and grading. It is extremely hardy. It is a hard red-bearded variety and will do well any place where rye can be successfully grown. Prices on application.

### IMPROVED MALAKOFF.

This is a Russian variety of Winter Wheat, very similar to the Turkey Red. We have investigated the merits of it and find that in some localities it is yielding very satisfactorily, and we can recommend it for certain sections of the Winter Wheat Belt. Description, same as Turkey Red. Our seed is free from rye, guaranteed to please and equal to the best. Prices on application.

## OATS.

## TEXAS RED RUST-PROOF.

**Description.**—The Texas Red Rust-proof Oats are not a handsome oat to look at, but what they lack in beauty they abundantly make up in certainty of crop and yield. They grow to a medium height,  $3\frac{1}{2}$  to 4 feet tall, having a sprangly head well filled with grains, often running 100 to 125 kernels to the head; also a splendid stooler. The grains or kernels are of a yellowish-red cast, with a husk extending well out over the tip ends, hence do not weigh out quite as heavy per measured bushel as some other varieties, but easily make up this difference in bushels. In brief, we can most heartily recommend these Oats and their adaptability to any place where Oats are grown, and especially recommend them to our Southern friends and customers.

We have made a leader of our Rust-proof Oats for several years and have found it the best all-purpose variety, and it has given the very best of satisfaction. Many customers report extravagant yields and everyone speaks in the highest terms of it. We want to urge you to get started growing our Rust-proof Oats.

This variety is a wonderful yielder. Machine measures from a crop have shown a yield of 128 bushels per acre. It is absolutely rust-proof. The grade of oats is the highest, plump, heavy berries, with lots of meat, which makes fine oat meal.

This rust-proof feature is a great deal in their favor for this climate, being subject to cool, damp weather, and the heavy fogs and dew of night and morning followed by hot sunshine during the day will often rust the oats, causing the straw to break and fall, and, instead of plump oats, there is nothing but chaff or an inferior grade of oats. When you sow Oats, it is worth a great deal to know you are insured from rust and blight. We have seen fields of Oats adjoining fields of Rust-proof that were rendered almost worthless from rust and blight and not paying the expense of harvesting and threshing, while the Rust-proof made splendid yields of good, marketable oats and plenty of bright straw.

Did your Oats pay last year? If not, try Texas Red Rust-proof Oats. If you want your Oat crop to pay better than common varieties, try Rust-proof Oats. Our stock of Rust-proof Oats this year is the finest and best we ever had. Every bushel has been carefully cleaned and is free from weed seed and just the kind of seed you would wish to sow. If you need seed Oats, order this variety, as it is sure to please.

Rust-proof has a stiff, narrow leaf straw that stands up well against wind and rain and is still very valuable for feed. The berry is plump, old gold in color and well filled with kernels, good feeding quality, medium early, maturing between the Champion and common Oats. Price \$1.50 per bushel.

## BLACK BEAUTY.

We have always experienced a big call for Black Oats, but have never been able to supply the demand. This past year we made arrangements for our seed stock and contracted the crop, so that now we are in position to offer the finest seed we have ever seen and can furnish our customers with the pure seed of famous Black Beauty Oats.

Last year we could not offer these Oats at any price, as we did not have the stock, but now we can furnish them at a slight advance over the common White Oats. We look for a big call for them, as every year many customers have asked whether we could supply them with seed. On account of this variety being so much sought after, it would be advisable to order early.

They are preferred by those who have used them on account of their superior yielding qualities and unequalled stiffness and strength of straw.

Black Beauty Oats are the best of all Black Oats. They are early, the straw is long and vigorous, and the head is extremely long. On account of its remarkable stooling propensities, two bushels are amply sufficient to seed an acre. Price \$1.50 per bushel.



Texas Red Rust-proof.

## SPELTZ or EMMER.

Speltz has been grown in the United States in a large way for several years and each succeeding season not only amplifies its value, but sees its production increasing to an enormous extent. It is found to be adapted to a wide range of soil and climate, to resist extreme weather, to be of excellent feeding value and to yield much more heavily than Oats or Barley, so as to insure its increased popularity and its eventual place among the leading and standard cereal crops of the world. Those who have not grown Speltz should not let another season go by without giving it a place, and an important place, too, on the farm.

"What is Speltz?" is a question often asked.

Speltz is a cereal, or grain, to sow, and resembles Barley in appearance, the kernel when hulled resembling Rye.

It has a thousand good points, and not one bad one. It is as good for all stock as any other grain. It is good for hay and it fattens in the green state.

It is the most profitable hay and grain food on earth.

It will grow any place on earth where any other grain crop can be raised.

It is the greatest drought-resister on earth and is very popular all over the arid regions of the West and is only affected by excessive rains.

Speltz matures earlier than Oats or Spring Wheat.

It neither rusts, blights, nor lodges.

It yields 10 to 20 bushels per acre more than Oats.

It is valuable for feed and is a perfect food for cattle, hogs, horses, calves, and colts. They all like it and thrive on it.

We have sold thousands of bushels during the last few years and we can truly say that we have never had a dissatisfied customer, but all we have heard from speak in the highest terms of its wonderful qualities.

## We Recommend Speltz:

Because it is a sure crop, hardy and prolific.

Because it produces more grain per acre than Wheat, Oats, or Barley.

Because it is rich in protein, therefore nutritious and eaten readily by all kinds of stock.

Because it does not lodge, therefore making a good nurse crop for Grass.

Because it can be grown on any kind of land; worn-out Wheat land will grow good Speltz.

Because it does not require special machinery for sowing, harvesting, or threshing.

Because its straw is valuable for food.

Because it has pleased our customers.

As a swine feed we think well of it, especially for brood sows. Horses do well on it.

In appearance it is very much like Barley and is closely related to Wheat, being used for flour in European countries.

**Speltz is adapted to a wide range of soils and climates.**

Prices on application.



## BARLEY.

The demand for seed Barley increases each year. The farmers, even right here in the Corn belt, have been thoroughly convinced as to its valuable feeding and yielding qualities.

Many who objected to Barley on account of the unpleasantness in handling the old-style bearded varieties are enthusiastic growers of the beardless sort. Many are sowing it in preference to Oats, for it will make more grain and feed per acre.

It is early; in this section being ready for harvest the last of June or the first of July.

It stands up better than any other kind of grain.

The yield is almost invariably good, often yielding more per acre than Oats.

Its muscle and bone-producing qualities make it a good feed.

It is the best nurse crop for Grass yet discovered.

Barley culture is similar to that of Spring Wheat or Oats. Fall-plowed ground is preferable to early spring plowing. Do the work shallow and harrow the ground thoroughly after seeding. Sow early, putting in about  $1\frac{1}{2}$  to 2 bushels per acre.

**Improved White Hull-less Barley.**—Improved White Hull-less Barley is taking the lead as the most desirable variety of Barley to grow. This variety has become known and proven its worth as the most profitable variety that can be grown.

Our seed is of the finest quality, and we don't anticipate any trouble in filling your order or in delivering a quality of seed that will please you in every respect.

This Barley is like no Barley of which we have knowledge and none has proven so valuable to the stock-raiser as the Improved White Hull-less. It is not a mauling variety, but for feeding purposes there is no Barley raised that can compare with it in earliness, yield, and quality. It has many valuable properties. While it has sufficient hull to hold it in the head, these hulls are readily separated in threshing. The absence of beards makes it safe to feed to all kinds of stock. Its earliness is a characteristic which is essentially desirable. It will mature in from 60 to 90 days, according to soil and locality. Those seasons in which Wheat failed on account of drought, insects, or disease, White Hull-less Barley was sown in June and had ample opportunity to mature, providing there was sufficient moisture to start germination.

The grain is especially heavy, weighing from 60 to 63 pounds to the measured bushel. The yield varies according to soil and climatic conditions, but it can be depended upon to produce from

40 to 80 bushels to the acre. Its nutritive value is very great. It is fed to work-horses at the rate of two quarts where four quarts are required. The best way is to mix it with oats and grind the two together for horse feed. It is also very valuable for feeding poultry, hogs, and all kinds of stock. As fattening feed for hogs it has no equal.

It is often grown for hay, coming very early and providing rich feed. It should be cut before it is ripe, while straw is green; in this condition it is relished by all kinds of stock. The straw is stiff and straight and seldom if ever does it lodge. Prices on application.

**Six-row Manshury Barley.**—This Barley has made millions of dollars for farmers. Hundreds of farmers think there is no Barley in the world that equals Manshury. It is an early six-rowed Barley that grows very vigorous and strong, bearing long heavy heads filled with nice plump kernels that discolor very little with wet weather.

Manshury is an ideal grain feed for horses, and when ground is fine for hogs and other stock. It is a profitable crop to grow for the market, malters paying the highest price for Manshury. It will do well on any kind of land or in any locality where other crops grow. It prefers a soil lighter than is necessary for good Wheat. Prices on application.

**Champion Beardless Barley.**—This Barley is as easily grown and handled as either Oats or Wheat. It is an improved beardless variety of a distinct six-rowed type. It is similar to Success Barley, but is larger, has a longer straw, and yields more per acre. Being beardless, it is pleasant to handle, and the straw can be fed to stock without fear of injury.

Champion Barley, when growing closely resembles Wheat, but after it is threshed it looks much like other Barley. It grows very rapidly and ripens early. If sown as early as Spring Wheat, it will ripen in this climate about the last of June or the first of July. When ripe, it makes a splendid appearance, as the heads drop a little and show even and thick. The straw is stiff and able to hold up whatever amount of grain the land produces. It is a splendid feed for all farm stock. Try it once for feeding, and you will wonder why you did without it so long. Sow as early as you can; the frost does not hurt it.

It is the earliest Barley in existence. It matures in less time than any other Barley that we know of, and gets out of the way of other harvest. It helps out wonderfully when you want to get quick feed for your stock. It is an absolute fact that your cattle, sheep, horses, and hogs will thrive and fatten on it, and it is a splendid grain for a change of feed in connection with a corn diet. It is a Barley that will pay you to grow. It is easily harvested, and wonderful in its yield, and marvelous in its health and feeding qualities. In spite of bad weather and adverse circumstances, it has yielded on hundreds of farms from 40 to 70 bushels per acre. Prices on application.





## KAFFIR CORN.

15c per lb.; 10 lbs., \$1.00. Ask for quantity prices.

Kaffir Corn is the principal grain crop in many sections of the Southwest on account of not being affected by drought. It is being more generally used, and we take pleasure in recommending it, not only as a grain, but as a hay crop. Kaffir Corn makes a great yield of the finest kind of feed, when sown broadcast and cut for hay. It has advantages over Cane, as the hay can be cured the same as Millet and stacked, making higher quality of feed. We have a large stock of extra fine seed, testing high for germination, and can supply you with seed that will make the best yield. Valuable both for fodder and grain. Always yields an immense crop of seed, even on the poorest of soils and in the driest seasons. Especially adapted where summers are hot and dry.

Kaffir Corn has proven invaluable to Western farmers as a fodder and grain crop during dry seasons. It does very well everywhere in the Corn belt and can be grown successfully as far north as Minnesota. On good ground it will yield 50 bushels of grain per acre, besides affording a great amount of fodder. Every farmer should plant at least a few pounds of Kaffir Corn for his poultry. The grain cannot be excelled for fowls.

If cut when the first seed heads come into bloom, a second growth will shoot up and produce another crop of forage or fodder, which sells for more on the market than Clover hay.

Sow broadcast, and handle like Cane, putting on from 75 to 100 pounds per acre, or drill with corn planter, putting on about 10 pounds per acre, then cutting with a corn harvester and threshing like grain. Some feed it to stock, heads and all, while others cut the heads off and thresh them. Any way it is treated it makes a valuable feed.

While for forage and grain the Kaffir Corns lead among the grain Sorghums, a longer season is required for them to mature. The Kaffir Corns are largely used for roughage, because the stalk is slightly succulent.

**Standard Kaffir Corn.**—Sow in rows  $2\frac{1}{2}$  to  $3\frac{1}{2}$  feet apart and cultivate the same as Corn. Five to ten pounds would seed an acre in rows, or  $\frac{1}{2}$  bushel broadcast.

**Red Kaffir Corn.**—Grows taller than the White; stalks slender, juicy, and very leafy. The seed is red and smaller than the White and yields much heavier.

### DWARF KAFFIR CORN.

An especially fine fodder plant. It grows from  $3\frac{1}{2}$  to 5 feet in height—depending on the quality and condition of the soil and also on the weather conditions. The heads are larger and more shapely than those of Kaffir Corn. Stalks keep green, not getting hard like other Sorghums, and are juicy and brittle. Dwarf Kaffir Corn makes fine fodder, either green or dried, and is relished by horses and cattle. Dwarf Kaffir Corn is the result of careful selection and produces a plant of uniform dwarf growth. It makes a crop in less time than the usual type of Kaffir Corn grown in Oklahoma and Kansas and also produces a larger crop of grain. For fodder, sow 1 to  $1\frac{1}{2}$  bushels per acre broadcast. If in drills to be cultivated, plant 2 to 3 pounds to the acre.

### DWARF BLACKHULL KAFFIR CORN.

Carefully selected seed, which produces a uniform dwarf growth, usually from  $3\frac{1}{2}$  to 5 feet in height. Finely shaped heads, with heavy seed formation. Makes excellent fodder, either dried or green. Does fine on upland.

### DWARF PINKHULL WHITE KAFFIR CORN.

Same as Dwarf Blackhull Kaffir Corn, except of a pinkish or reddish cast. About  $3\frac{1}{2}$  to 5 feet high—depending on the soil. Makes fine fodder. Produces crop in shorter time than Blackhull and larger crops of grain than ordinary Kaffir Corn. This is a very desirable type and extremely popular in the Middle West, especially when grown on upland.

## HOOVER CORN.

A wonderful product. Heads and grain similar to Kaffir Corn, foliage and stalk like Cane. A fine grain to raise for ensilage. We want you to try it. Lb., 20c; 10 lbs., \$1.50. Ask for quantity prices.

## BROOM CORN.

The price of Broom Corn has advanced until now it is much more than double what it was two or three years ago. The price is such now that it certainly is remunerative and one of the best-paying field crops that can be raised in many localities. It will certainly pay you to investigate this crop and see if you cannot raise it with profit. You can also make your own brooms. You cannot get much of a broom for less than \$1.00, and for a few cents you can get sufficient seed to make brooms to last you for years, so why not buy some seed?

Broom Corn is one of the most profitable crops the farmer can grow. Last year the straw sold as high as \$200 per ton. We would strongly advise more of our farmers to grow this crop.

Broom Corn requires soil and culture similar to Corn, but should be planted later. It pays better to have the ground in prime condition. It is frequently planted in drills  $3\frac{1}{2}$  feet apart, leaving the plants 6 inches apart.

**Evergreen or Standard.**—Is a favorite in Kansas, Nebraska, and Missouri. It grows to be a good length, and if cut at the proper time has a good color, but if allowed to stand will redden at tip as seed ripens. Ask for prices.

**Dwarf Evergreen.**—This is a very popular variety on account of its not being so liable to blow down and lodge as the taller varieties. Heads are very bushy, and it makes a fine yield. Ask for prices.

**Oklahoma Dwarf Broom Corn.**—This is the variety most generally grown in the Southwest. Very early, strong-growing, and productive, but only about 5 feet high, making it easy to handle the long and well-fibered brush. Seed is from progressive Broom Corn growers who know the market requirements and improve their seed by selecting each year. Ask for prices.



## SOY OR SOJA BEANS.

All varieties, lb., 20c; 10 lbs., \$1.50. Ask for quantity price.

Soy Beans may be utilized either as a soiling crop, pasture crop, hay crop, or grown for seed. As a soiling crop for cows, no crop surpasses them for producing a high yield of milk. Hogs turned into a patch of Soy Beans as the beans are commencing to form will make a phenomenal growth. The Soy Beans will produce under favorable conditions 12 to 13 tons of fresh fodder per acre, containing large amounts of crude protein and fat, which makes an excellent forage to mix with corn fodder or other forage plant high in carbo-hydrate, but low in protein.

You should consider its value as a grain, as no other grain crop causes as high a per cent of protein and fat, analyzing richer than oil meal, nearly equal to cotton seed meal, and far more palatable and digestible than either.

Its value as a forage crop shown by chemical analysis test that it compares very favorably with Alfalfa.

**Culture.**—Soy Beans do best on a medium soil, but will make a splendid growth on poor soil, if seed is properly inoculated. Ground should be well prepared and planted about the same time as Corn. If crop is desired for hay, sow broadcast or drill about one bushel to the acre, and to sow a seed crop, plant in rows the same as Corn with a planter every 3 inches, using about  $\frac{1}{2}$  bushel of seed to an acre. Soy Beans may be planted quite late to good advantage, often planting after a grain crop has been harvested. Plant between Corn rows at the last cultivation.

The time of harvesting depends upon the use to be made of the crop. If you wish to cut for hay, this should be done when the pods are quite well developed for best feeding value, while stock relish the hay more when cut at an earlier stage. Possibly the best time to harvest would be when the pods are forming.

For a seed crop, it is best to wait until most of the leaves have fallen and then cut when the dew is on, bunch with a self-rake and leave in bunches until dry enough to shock up.

**Leve San Sojas.**—An old variety, and the best real early Bean. Matures probably five days earlier than Mongol; is well adapted to Michigan and other States in that latitude; beans medium size, yellow. It branches reasonably well, stands erect, and is a reasonably good yielder. Sow about 20 pounds to acre.

**Mammoth Yellow Soja.**—Largest-growing and most popular of So Beans for forage purposes. A little later in maturity than other kinds, but makes larger yields, both of forage and seed. Especially valuable for this section and further South. This Mammoth Yellow as the most desirable variety to plant.

**Medium Early Yellow.**—This variety is popular for growing throughout the Central States, as it matures earlier than the Mammoth Yellow. It does not produce as much forage, but it produces a heavy crop of beans, which makes it desirable.

**Black Ebony.**—Black Soy Beans are becoming very popular and produce wonderful crops of nutritious beans.

## COW PEAS.

All varieties, lb., 20c; 10 lbs., \$1.50. Ask for quantity price.

Everybody's Clover—Food for Man and Beast.

Cow Peas are too familiar to every man and woman to need description. The character of growth in the many different varieties is quite varied. They are usually planted any time after corn - planting season is over, up to the first of August. Some varieties are highly esteemed for garden use, others for making hay and enriching the land.

**Elackeyes.**—Early, quick-maturing bunch variety that fruits abundantly on black clay soils or sandy soils alike. Especially desirable for table use.

**New Era, Wild Goose, Etc.**—Early, quick-maturing sorts, having bluish speckled beans. Several different kinds are sold under these names, but all are popular.

**Brabham.**—A new variety, said to be a cross between the Iron and the Whippoorwill, and resists disease like the Iron.

**Whippoorwill.**—A well-known variety, with brownish speckled seed, noted for its vigor and usefulness as a seed, hay crop, or soil-renovator. Most popular of all Cow Peas.

**Clay.**—Vines grow long and leafy; late-maturing. Especially desirable for hay and soil work.

**Wonderful or Unknown.**—A variety valuable on account of its immense growth of vine.

**Mixed Cow Peas.**—Many farmers planting Cow Peas solely for soil-improvement prefer to sow a mixture of varieties.

## PEANUTS—GOOBERS.

For Hay, Grain, Hogs, and Cash Crop.

All varieties, lb., 45c; 10 lbs., 40c lb.

**Peanuts** have come to be a large crop. The more their merits are understood the more they are planted. They often yield more feed per acre than Corn, Oats, Milo, or Kaffir, and the crop is worth about twice more per pound. They yield from 15 to 50 and sometimes as high as 100 bushels of nuts per acre and from 1,000 to 4,000 pounds of hay.

**Peanuts a Money Crop.**—Owing to recent high prices for cooking oils, Peanuts have been selling for unusually high prices. Peanuts contain about 48 to 50 per cent oil, whereas cotton seed contains only 15 to 16 per cent. The demand for Peanuts from the confectioners is growing. The Spanish nuts have a richer and more acceptable flavor than the Virginia Jumbos, once so familiar.

**Peanuts for Hogs.**—But while Peanuts are profitable as a confection, for oil and meal, as a grain and hay crop to be harvested and marketed as such, many farmers are "hogging" out the nuts with very profitable results.

**Cultivation.**—Details vary with local conditions; but it is usual to plant the early spring crop at late corn-planting season, and continue planting as conditions allow, the late plantings being on the grain stubble. The rows are 30 to 36 inches apart, and the nuts dropped either by hand or by machine every 6 to 12 inches in the drill and covered 2 to 2½ inches deep. This usually requires 1 to 2 bushels per acre.

**Spanish Peanuts.**—It is important to have a good strain of Peanuts to make the best crops. Only nuts of good germinating quality should be used for seed.

**MILLO MAIZE.**

A non-saccharine Sorghum of high value; cultivated like Corn. It is a vigorous grower, of deep green color, attaining a height of 8 or 10 feet. Some stalks develop twenty heads. The seed is fed to horses, cattle, chickens, etc. It will mature its main head in 100 days, and will continue growing until frost. Plant 4 to 5 pounds per acre. Similar to Kaffir Corn, but grows larger heads and produces a slightly larger grain. Cultivation is same as for Kaffir Corn. It will pay you to try it. Lb., 15c; 10 lbs., \$1.00, postpaid. Ask for quantity price.

**FETERITA.****Great Dry Weather Crop.**

For the last four years the agricultural papers have been telling about the wonderful yield made by this new grain during the worst droughts that the Middle West has ever experienced. Feterita is from twenty to forty days earlier than Kaffir Corn, is not bothered by chinch bugs, and makes good fodder; in some instances made an excellent yield of grain without having received any rain from the day it was planted until it was harvested. No variety of seed of any kind has sprung so suddenly into such popular favor. Feterita has taken the country by storm.

Feterita belongs to the same class as Kaffir Corn and Milo Maize, but is considerably earlier than either one, and is said to stand drought better and makes a larger, softer grain. In manner of growth, it is about half way between Kaffir Corn and Milo Maize, but the heads stand perfectly straight and erect and the grains are very large, pure white, and comparatively soft. It can be fed without grinding.

The results obtained in the various agricultural schools and experiment stations and by others who have given it a thorough trial all tend to prove that it is not only of particular value, but has many points of superiority over both of the more familiar grain Sorghums, Milo Maize and Kaffir Corn. Feterita has withstood the drought and in practically every instance has matured where Kaffir Corn and Milo Maize are failures. Lb., 15c; 10 lbs., \$1.00, postpaid.

**JERUSALEM CORN.**

One of the best grains for cattle-feed, either ground or whole. Plant same as Kaffir Corn. It grows 3 feet high, has one large head on main stalk and several smaller heads on side shoots. Grain, pure white, flat, shaped like a disk. Sole crop for driest countries. It is marvelous how it will produce on practically no moisture. 5 lbs. seed to acre. Lb., 15c; 10 lbs., \$1.00.

**PENCILLARIA.**

Pencilaria is a heavy-yielding nutritious forage plant. It is an annual, producing a heavy growth of broad dark green leaves, closely resembling those of Corn. It should be sown very thin, as it stools out like Wheat. Do not plant until ground is warm; sow at corn-planting time in rows 3 feet apart and only two or three seeds to the foot; 4 pounds will be sufficient for an acre. Cover  $\frac{1}{2}$  inch deep. Cultivate same as Corn. Lb., 10c; 10 lbs., \$1.00, postpaid.

**MAMMOTH RUSSIAN SUNFLOWER.**

The Sunflower, which has long been known as a pest and a weed, during the past two or three years has proven to be a most excellent crop for ensilage. It produces an enormous tonnage of from 20 to 30 tons per acre. It was fed to dairy cattle and was found to be satisfactory in every way. The cows were just as anxious for it and produced as much milk as when fed on other ensilage. During the past year large tracts of land have been producing Sunflowers with good success. The seed is also very valuable as a poultry and hog feed. It should be sown in rows far enough apart to admit of cultivation. 2 to 3 pounds are sown per acre. Lb., 30c; 10 lbs., 25c lb., postpaid.

**HEGARI.**

Hegari is a very early, quick-maturing, drought-resisting grain Sorghum that is preferred to Milo Maize or Kaffir Corn by many growers. Prices on large lots sent on request; small lots, lb., 25c; 10 lbs., 20c lb., postpaid.

**SHALLU, OR CHICKEN CORN.**

Sometimes called Egyptian Wheat, California Rice, etc. This is a tall, rank, long-growing grain Sorghum that stools out from the roots, each grain producing several stalks to a stool. The heads are large and open like Broomcorn, having a lot of grain in each head. It stands dry weather well. The grain can

be popped like Popcorn. Sow in drills like or Cron Kaffir Corn, 3 to 6 pounds of seed per acre. Prices on large lots sent on request. Lb., 20c; 10 lbs., \$1.25, postpaid. Ask for quantity price.

**RAPE.**

Dwarf Essex Rape is an annual, bearing a close resemblance in leaf and stalk to the Rutabaga, but both leaves and stalk are more numerous in the Rape plant and of a taller habit of growth. It is a pasture plant, which may be eaten off by any kind of live stock, but it is pre-eminently fitted to furnish pasture for sheep, cattle, and swine; A good crop will furnish at least 12 tons of green food to an acre.

Dwarf Essex Rape thrives best on a good soil, rich in vegetable matter. Slough lands are excellent. This plant may be grown successfully in the following ways:

1. In the early spring, to provide pasture.
2. In June or July, to provide pasture.
3. Along with grain, using 2 pounds of seed an acre, to provide pasture for sheep after harvest.
4. Along with Peas, Oats, Clover seed, to provide pasture and get a "catch" of Clover.
5. As a cover in the orchard for winter protection, to avoid root-killing.
6. In Corn, sowing the seed with the last cultivation. The succulent feed produced may save the loss of cattle by corn-stalk disease.
7. Along with Rye, sown in August, in sheep pasture.
8. On early-plowed fields to shade the land and so that the soil will not leach, wash, or drift.
9. To plow under as a screen crop, adding humus to the soil.

When Rape is sown broadcast, 5 pounds of seed an acre will suffice; when sown in rows, say 30 inches apart and cultivated, from 1 to 2 pounds an acre will be enough. Lb., 30c; 10 lbs., \$2.25, postpaid. Ask for quantity price.

**BUCKWHEAT.**

Lb., 15c; 10 lbs., \$1.25, postpaid. Ask for quantity price. Buckwheat should be sown about the middle of June at the rate of from  $\frac{1}{2}$  to  $\frac{3}{4}$  bushel per acre. You will avoid the danger of its spoiling by threshing as soon as dry.

Buckwheat is one of the very best cover crops that can be grown in the orchard, and the flowers are very much relished by bees. Buckwheat is the cool season's crop and one which can be sown very late in the season and will produce very satisfactory returns. It can be handled at a time when other crops are not needing attention, and we believe it should be much more generally sown than it is at present. Is exceptionally suited for late planting on wet ground or after grain crop is harvested.

**Japanese.**—This is a very popular variety of Buckwheat. The plant is of stronger growth than common Buckwheat and resists drought and blight much better. The grains are a rich dark brown, having a thin hull and larger grain than Silver Hull. It ripens a week earlier than other varieties, and is perhaps the best for light and sandy soils and for the dry climate of the West.

**Silver Hull.**—This is a thin-shelled Buckwheat of a silvery gray color. It has a very solid, medium-sized grain. It stays in bloom longer than the other varieties, thus producing a larger crop. The flour made from Silver Hull is light in color. This variety is most excellent for bees and is very popular.

**CANADIAN FIELD PEAS.**

After grain has been grown year after year on a field a great deal of the life and fertility is taken from the soil, and there is no crop which will do more to replenish and enrich the soil than Canadian Field Peas. Peas are second only to Clover in their soil-enriching properties, and can be grown under almost any conditions of soil or climate. There is always a ready market for Peas, or they can be properly ground and fed to stock. The vines make rich, nutritious hay, which is especially good feed for cows. They can be planted in many ways: first, when sown alone, about 2 bushels per acre are required, and they can be matured and threshed when dry. The yield will vary from 30 to 60 bushels per acre. For hay, Peas and Oats should be sown together, using 1 bushel of Peas and 1 bushel of Oats per acre. The Peas should be sown first and covered to a depth of about 4 inches, then drill in the Oats. The vines grow to a height of about 3½ feet. Lb., 20c; 10 lbs., \$1.25. Ask for quantity price.



## ALFALFA.

Fancy grade, lb., 50c; 10 lbs., \$4.50. Ask for grades and quantity prices.

### THE BEST OF ALL PLANTS FOR HAY AND PASTURE.

Alfalfa, the most valuable forage plant ever discovered, was first found in Asia, but its present wide distribution throughout the world indicates a remarkable adaptability to various soils and climates.

It is now the principal leguminous forage crop of all continents of the world and is one of the staple crops in our country. By experimenting, varieties have been produced which do well in the coolest climates of the North.

Alfalfa is a soil-builder, and not a soil-destroyer. The roots often reach the length of fifteen feet. This penetration not only loosens the soil for the roots of the next crop, but brings to the surface the phosphorus and potash stored below. The plant itself absorbs nitrogen from the air and stores it up in the ground, thus rendering a valuable service to the farmer and greatly enriching and increasing the productiveness of the soil for crops which follow.

A few general rules can be laid down for Alfalfa culture, as different conditions require different methods. It is undesirable, therefore, to do a great deal of experimenting in undrained districts. Small tracts should first be planted in order to ascertain the correct method.

In selecting the field which is to be seeded, the following conditions should be carefully considered: (1) depth and texture of the soil; (2) drainage; (3) fertility; (4) the need of inoculation; (5) the need of lime; (6) freedom from weeds. These are so vastly important that if any are neglected the growing of Alfalfa may be rendered impossible.

Soil: Alfalfa gives best results on deep, loose, open, friable soils. Drainage: Alfalfa does not do well where the water is nearer than six feet to the surface. Drained bottom lands are good, but land slightly rolling or level and well drained are best. Fertility: Alfalfa, being a legume, is able to add nitrates to the soil through the nodules in forming bacteria within its roots. Since large yields of Alfalfa draw heavily on the other elements of soil fertility, it naturally requires the richest and best drained soil on the farm. Inoculation: Inoculation means putting into the soil the nitrogen-fixing germs or bacteria without which the Alfalfa will not flourish. On soils which do not naturally contain these germs, it is essential that they be artificially introduced. A small area may be seeded and inoculated the first year, from which soil may be secured for larger areas in following seasons. There are two methods of securing this inoculation. First, by procuring soil from a nearby Alfalfa field where the plants are vigorous and have an abundance of tubercles on their roots. 300 to 800 pounds or more of soil should be used per acre, distributing as evenly as possible. The soil should be taken in a moist condition and dried in the shade, then distributed over the field with a drill or broadcast, either in the evening or on a cloudy day, as the rays of the sun will kill the bacteria. A thorough harrowing of the field will so bury the inoculated soil that the germs will live.

Some of the State experiment stations will now supply soil, charging only the cost of handling. Artificial cultures or colonies of germs grown in laboratories and distributed in bottles or cans are now available. This method is the simplest, as the inoculating liquid can be sprinkled over the seed just before planting.

### LIME.

Acid soil will not permit Alfalfa to grow. This is often the case where corn or wheat has been raised for many years. A simple test for determining acidity in soil is to make a deep cut in the ground with a knife, pushing the earth apart, then place a piece of litmus paper (procureable at any drug store) into the opening and press the earth together. Leave the paper a few hours. If it changes from blue to red, it is proof of acidity. Lime is then needed to sweeten the acid soil. If agricultural lime can be bought at \$3.00 per ton, it will pay to sprinkle from 1 to 2 tons per acre on the land before planting Alfalfa.

### WEEDS.

Young Alfalfa plants are very tender and are apt to be killed by weeds during their earlier stages of growth. For this reason the land should be as free from weeds as possible. If a weedy soil must be used, it should be plowed several months before seeding and several crops of germinating weeds destroyed by frequent harrowing.

### PREPARING THE SEED BED.

The seed bed should be fine on top, but thoroughly settled. The young tap-root of the plant strikes down immediately and is apt to be injured if it strikes a layer of loose dry soil. The ground should be plowed at least six weeks before seeding, harrowed and disked immediately after plowing; then it should be worked every ten days or two weeks, or at least after every rain, until the seed is sown.

### TIME OF SEEDING.

Alfalfa should be sown between the 15th of May and the 15th of June. The seed should be covered, and not sown on the surface, as is sometimes done with Grasses and Clover. It may be sown either with a drill or broadcast. It is best to sow half the seed one way across the field and the other half the other way at right angles to the line of the first sowing.

### DEPTH OF PLANTING.

Depth of planting depends upon soil conditions; covering from three-quarters to one inch deep is usually sufficient on clay soils, but an inch and a half is necessary on sandy soils or in semi-arid sections. From 8 to 12 pounds of seed should be used per acre, depending on the evenness of the seed bed and preparation of soil.

### NURSE CROPS.

If a nurse crop is used, Barley, Wheat, or Rye are much better than Oats, as Oats require too much water and give too much shade. In using a nurse crop, the Alfalfa seed and the grain should be sown separately, and not mixed before seeding.



### ALFALFA—Continued.

#### "A HOG'S IDEA OF HEAVEN."—Coburn.

The U. S. Department of Agriculture says Alfalfa at two years adds \$100 to the value of every acre on which it grows. There is no State in the Union in which Alfalfa can not be successfully grown. It enriches the soil and will produce from three to five cuttings of the finest hay per year. As a soil-builder, the Iowa Experiment Station claims that an acre of Alfalfa adds over twice as much nitrogen to the land as an acre of Red Clover. Nitrogen is an important element in the soil and the one most likely to give out. Alfalfa does not take nitrogen from the soil, because it gets its nitrogen from the atmosphere. One of the most important characteristics of Alfalfa is the long tap-root, frequently extending fifteen or more feet into the soil. Unlike most farm crops, Alfalfa makes nearly all its growth below ground the first season. The deep-growing roots penetrate the subsoils and bring to the top soil the phosphorus and potash stored below, making them available as plant food. After the great roots decay, they form passages for air and water, besides leaving openings for the roots of the next crop. Our Alfalfa is the best that can be obtained. 1 lb., 55c; 10 lbs., \$4.75, postpaid. Write for quantity prices.

#### FACTS ABOUT ALFALFA.

"There is no State in the Union in which Alfalfa can not be successfully grown."

Alfalfa is more valuable than Clover, since, wherever it flourishes, it yields more per acre and is worth far more as a feed. Alfalfa produces from 3 to 7 tons of hay to the acre.

It has as much protein as wheat bran.

360 stalks have been grown from one seed.

It does not exhaust the soil; it enriches the soil.

It will grow three to five crops a year.

Alfalfa in money value is worth 45 per cent more than other Clovers and 60 per cent more than Timothy.

Ten milk cows can be fed on less than two acres by soiling.

One acre will pasture 20 pigs for six months.

Three pounds a day makes a full feed for fattening lambs.

Four to five pounds makes full feed for fattening aged sheep.

Thirty-five pounds makes full feed for fattening steers.

Sheep fed on Alfalfa will gain from 8 to 15 pounds in 75 days and will double with small grain ration added.

Lambs wintered on Alfalfa will produce one to two pounds more wool than when on the ranch.

Fed to dairy cows, Alfalfa maintains the flow of milk equal to June grass. It can be chopped fine with corn meal. Such a mixture is worth more a pound than the original corn meal.

Many interesting facts in addition to above might be cited about Alfalfa. It would hardly be possible to say too much about Alfalfa; it is a working plant which is changing the destiny of many farming sections.

There is no need of any farmer being short of hay, if he has a good field of Alfalfa. It will produce three crops the driest kind of a year, and when conditions are more favorable it will make four crops. Any plant that will do this merits a place on each and every farm.

It is not alone in hay that Alfalfa excels, but as a pasture crop it has great possibilities. All stock are very fond of Alfalfa pasture, but we believe it to be the ideal pasture for hogs.

When hogs are turned on an Alfalfa pasture, you can stop feeding your high-priced corn, for they will make a good growth on Alfalfa alone; but of course we do not recommend growing hogs in this way, as you want to use a little corn and other feeds along with your pasture in order to get the maximum growth on your hogs in the least possible time, and by doing this you are getting the greatest returns from your land.

A nice field of Alfalfa is the farmer's delight. He is proud to show this field to his neighbors and friends and tell them how many crops he has cut from it and how he values it more than any other crop. Why is it that he is so proud of this particular field of Alfalfa? Is it because the green Alfalfa when growing is so pretty, or is it because this field is bringing him more dollars per acre than any other part of his farm?

Every wide-awake farmer is very much alive to the desirability of having at least one field of Alfalfa on his farm. Every farmer who has once raised it for feeding purposes considers it nearly indispensable and so very profitable that he is figuring on purchasing more seed and increasing his acreage.

Alfalfa is an easy crop to grow. No one ought to fail in growing it. No one need fail. It has been grown successfully in every State in the Union and in some parts of nearly every county in every State. We venture the assertion that Alfalfa can be grown on 99 per cent of the farms in the United States. It is needless for us to go into details in regard to the wonderful possibilities and great value of this plant.

It strongly resembles Clover in its habits of growth and in its feeding value. It is very rich in protein and as nutritious as the best mill feeds for dairy cows. Horses, cattle, and hogs fatten on Alfalfa pasture or hay. Alfalfa and corn ensilage form an ideal balanced ration for all farm animals.

No longer is Alfalfa an experiment. The demand for the seed increases each year. Farmers from every State report Alfalfa one of the best-paying crops grown.

#### DO IT NOW.

There is one way in which we can keep up the fertility of our acres with the largest profit, and that is through the use of Alfalfa. A wonderful soil-builder it is that is rapidly spreading over our land as its merits are heralded from mouth to mouth. Farmers have seen the wonder work of Alfalfa and are determined to have it on their farms. The old idea that it was hard to grow is disappearing.

Alfalfa means bigger crops. Its waving fields of dark green foliage indicate prosperity. It is a raiser of farm values, and through it mortgages disappear. The direct value of its hay and seed crops brings big cash returns, and the wonderful soil-enriching properties of the plant have a value in dollars untold.

Why wait any longer? Fields of Alfalfa mark the road to wealth. You can start now. In a short time there will be Alfalfa on every farm and we will then truly have a land that is overflowing with milk and honey. Decide to-day to do it.

When buying Alfalfa, you want the BEST and purest seed obtainable. Cheap grades are apt to contain sweet clover, yellow trefoil, burr clover, dodder, etc. We handle the best hardy, non-irrigated stock, for it has much stronger vitality than irrigated or foreign seed and gives better results. We can make you the very lowest price on the best reclaimed seed.

## CLOVER.



SWEET CLOVER, THE MONEY-MAKER.

Many of us do not appreciate that Sweet Clover is a crop that can be pastured without the danger of bloating stock. For pasture purposes it is a much more valuable crop than Alfalfa. Yet there are men who will continue to remain prejudiced against Sweet Clover. Why not judge the merits of the plant on the facts, rather than ideas. The feeding value of Sweet Clover and Alfalfa is the same; on that point the crops are equal, but each plant has its own individual points. Alfalfa is better than Sweet Clover for hay, because it is easier to cure it into good hay. Sweet Clover will also make good hay, but it must be cut before it becomes woody. But Sweet Clover fits into a rotation better. It forms a larger root system in a short time, and is superior to Alfalfa as a soil-building crop.

**Varieties.**—There are four varieties of Sweet Clover: White, Yellow, and Purple Blossom, all biennial plants, and the Yellow Blossom Annual. The Purple is not offered in a commercial way.

**Sweet Clover Hay.**—In the absence of more valuable forms of hay, Sweet Clover may be utilized for feeding all classes of live stock. In the North one cutting is usually possible the first season, especially if seeded without a nurse crop, and two cuttings may be obtained the second year. In the South two cuttings the first season and three cuttings the second season are ordinarily possible. The Massachusetts State Experiment Station seeded a plot of Sweet Clover May 8th and on September 9th it was cut, yielding cured hay at the rate of 2,700 pounds per acre. Another plot produced 6,672 pounds per acre in 1903 and 7,948 pounds per acre in 1904. At the Utah Experiment Station Sweet Clover made more than double the yield of any of the Clovers with which it was compared.

**Sweet Clover as a Soiling Crop.**—When cut green and fed to cattle, the Sweet Clover is usually less palatable than when fed as hay, although numerous instances have been noted where the freshly-cut green feed has been readily eaten by stock. As a soiling crop, it is best adapted for feeding to hogs. At the Ontario Experiment Station over thirty tons of green feed per acre were obtained in a single season.

**Sweet Clover as Pasture.**—Sweet Clover makes excellent pasture for horses, sheep, cattle, hogs, and chickens. Probably the easiest way to create an appetite for the plant is to commence pasturing the stock on it very early in the spring before other green feed has started. A sufficient number of animals should be kept on it to keep it eaten down close, so that at all times there will be an abundance of fresh shoots for grazing purposes. An

acre of Sweet Clover pasture will ordinarily support twenty shoats in addition to furnishing a light cutting of hay. Grazing appears to be beneficial to the plants, in that it induces stooling.

Stock when pastured on Sweet Clover make gains which compare very favorably with those obtained from either Alfalfa or Red Clover. The advantage which Sweet Clover has over the crops just mentioned is that it will grow on some soils too poor in humus for the successful production of either Alfalfa or Red Clover. Its chief advantages are ability to grow on and build up poor soils, to survive the mid-summer droughts which frequently occur throughout the country, and to produce early and late pasturage.

**Method of Sowing.**—The same methods are employed as with other Grass seed, but more closely to Red Clover. It is sown in the fall, but with greater success in the spring. It can be sown with a nurse crop or alone. It can be sown in the spring with Oats, Barley, or Speltz, or on Winter Wheat ground, using about 10 to 15 pounds of unhulled seed to the acre. When Sweet Clover is sown with such a nurse crop, the young Sweet Clover plants will be of considerable size by the time the grain is cut and on this account it is well to cut the grain as high up from the ground as possible. Many sow with a nurse crop, but it will make a little more growth the first season if seeded alone.

It may be sown broadcast if the seed is moist and fine, or, better still, plant with a press drill not more than an inch or two deep, in a good fine seed bed. For Lay it should stand thick and fine-stemmed, and be cut before it comes into full bloom. The green hay is quite succulent, and needs to be cured in small cocks, allowing it to get pretty dry before stacking. Sweet Clover is a biennial plant, and will all die the second season if not allowed to seed itself, so it need never become a bad weed.

We pride ourselves on being able to supply a little better quality of Sweet Clover than you can buy elsewhere. Our specialty is Sweet Clover, and can furnish seed such as you should sow.

Fall seeding of Sweet Clover is very successful in the South, where the winters are not severe. In the North it should be seeded early in the fall, the same as Alfalfa.

## CLOVER—Varieties.

**White Blossom.**—(Melilotus Alba.) This is the variety most commonly found and the one in greatest demand. All we have said on the preceding pages in regard to Sweet Clover has reference to the White Blossom. It is the variety that is grown so extensively as a cultivated crop and the one so much in demand. The White Blossom Sweet Clover is destined to become the most important of the legumes and will add millions to the wealth of the farmers of this country.

The great value of the plant is now realized, as it excels Alfalfa as a pasture crop and will produce nine tons of hay per acre than Alfalfa, the hay being fully equal in feed value. Its greatest value as a money crop is unquestionably in the seed crop. Sweet Clover will produce a heavy crop of hay the first year, the second year you can harvest a crop of hay and the second crop may be gathered for seed, as it does not make a seed crop until the second year. When harvesting the crop for seed, a sufficient quantity will shatter so as to reseed the ground without having to sow again. This should be remembered, and we would recommend the harvesting of Sweet Clover for seed, as it is a heavy producer of seed. It is not unusual to harvest from four to six bushels of seed to the acre; yields of as high as eleven bushels have been reported. The seed is in great demand and at the high prices at which seed sells it is not overestimating when we say you can produce from \$40.00 to \$80.00 worth of seed to the acre, besides having the first crop for hay, and can sell the hay after threshing for about \$10.00 per ton.

This variety grows on all soils and conditions, so no one can go wrong in sowing it. Nothing better for worn-out land, clay soils, wet bottom land, or, in fact, any land, no matter whether the poorest soil or the best—wet or dry—it will make the best-paying crop.

When seeding, the quality of your seed should be the first consideration, and we cannot emphasize this point too much. Beware of cheap seed, as it is apt to contain Alfalfa seed or noxious weeds. 1 lb., 45c; 10 lbs., \$4.00, postpaid.

**Unhulled White Blossom.**—In some sections the threshermen are not prepared to remove the seed from the hull and it is harvested in the hull and sold this way. We can offer the Unhulled at a lower price, as it does not cost so much to get it ready for the market. You can save some on the cost of your seed by using the Unhulled, and we have many customers who prefer to buy this way. We have a large supply of the Unhulled and are going to make very low prices on it. (30 pounds to the bushel.) 1 lb., 40c; 10 lbs., \$3.50, postpaid.

**Yellow Blossom Biennial.**—(Melilotus Official.) This variety is very similar to the White Blossom, but it does not grow quite so large and for this reason many prefer it for hay and pasture. If you wish Sweet Clover for fertilizing, the White Blossom is considered superior, but if you wish to grow for hay, we do not hesitate to recommend this variety to you. We have a large supply of seed and can sell it much cheaper than the White Blossom, and you can save money by using it. There will be more of the Yellow Blossom used this season than ever before, as our price is so very low, making a decided saving on your purchases. Our seed is extra fine quality and you will be pleased. 1 lb., 45c; 10 lbs., \$4.00, postpaid.

**Yellow Blossom Annual.**—(Melilotus Indica.) This is a variety of Sweet Clover, growing from 15 to 20 inches high, which is being used by many who wish something for quick results. It comes on earlier and makes a full crop the first season. It is a very valuable plant for the purpose of sowing with grain in the spring, as it will make a splendid growth of humus, restores nitrogen to the soil, and can be plowed under in the early fall, thus being equal or superior to a heavy coat of barnyard manure or some high-priced fertilizer. It is used by many preparatory to sowing Alfalfa when they wish to have it follow a grain crop. You sow the seed in the spring and right after harvest the crop is plowed under, making the ground in splendid condition for Alfalfa.

The seed is much cheaper than the White Blossom, costing about half, and you can use it to good advantage for building up your land when quick rotation is desired. Many farmers are sowing from 8 to 10 pounds of seed with every acre of small grain and then plow it under in the fall. It is being used in the place of Crimson Clover, as it is easier to grow, especially in the North. b., 25c; 10 lbs., \$2.00, postpaid.

**Alsike Clover.**—Known as Swedish Clover. Increasing in popularity very rapidly as its great worth is being recognized. This is a wonderful Clover, adapted to all kinds of soil where grass will grow, but especially adapted to moist, wet soil, where it is subject to overflow; providing the water does not stand on it too long at a time. There are thousands of acres of land scattered over the country that should be in Alsike Clover. Wet land, where not much but weeds, wire grass or swamp grass is growing, would produce a wealth of fine grass that is valuable for both pasture and hay.

Alsike Clover is not such a coarse plant as the Mammoth or Common Red Clover; more the nature of White Clover, except that it is much more erect, grows even better than Common Clover. The blossoms are purple—very similar to the blossoms of Alfalfa in size and color. It makes splendid hay for stock of all kinds and is especially fine for horse feed.

Alsike makes the best combination with other grass either for hay or pasture, and grows on upland as well as on moist soil. When sown with other grasses, it forms a thick bottom and greatly increases the yield. It is a perennial, and has quite an advantage over Medium Red Clover, for that is a biennial. When sown with Medium Red Clover, it has the advantage of making more permanent pasture; when sown with Timothy, it is one of the most superior grasses that any farmer can grow.

This is a splendid year to use Alsike, as it is much cheaper to sow than Common Clover. The seed is about the size of Timothy seed and goes much further. You will save money by using Alsike Clover, and will be delighted with results. You should buy Alsike Clover freely this season. 1 lb., 75c; 10 lbs., \$7.00, postpaid.

**White Dutch Clover.**—Commonly known as White Clover, that makes such good pasture and is so valuable for lawns. It is the hardiest of all Clovers, and accommodates itself to all manner of soils. Will endure the extreme heat and dryness of summer better than Blue Grass. Will not tramp out. Keeps soil from washing. Seed is scarce and hard to get and very high; however, it requires less to sow than others, as 5 or 6 pounds per acre is sufficient. 1 lb., 80c; 10 lbs., \$7.50, postpaid.

**Japan Clover.**—(Lespedeza.) This is particularly suited for waste lands, woodland pastures; grows fairly well on poor soils, and spreads rapidly, and when once established usurps wild growths, and will in many cases even subdue broom sedge. It is not, however, a pest, and can be gotten rid of by plowing it up, and is excellent as a fertilizer. Highly recommended for cover crop in orchards and used extensively for this purpose. Japan Clover is particularly valuable for pastures on such soils as described, and where the soil is good yields a fair quantity of good hay. It is relished by cattle, is nutritious and fattening. To obtain a stand, it is only necessary to scatter the seed broadcast in the spring during March and April at the rate of about 10 pounds per acre. Harrowing the land over before the seed is sown, when it can be done, is of course better, though this is not imperative. 1 lb., 65c; 10 lbs., \$6.00, postpaid.

**Medium Red Clover.**—This is regarded as the most valuable of the Clover family, and is largely used for pasture and hay. Clover adds greatly to the fertility of the land on which it is grown. It does not exhaust the soil, but enriches it. It makes two crops each year. The first is usually cut when it is in blossom for hay. The last crop may be harvested for seed, cut for hay, or plowed under to add fertility to the soil. For hay, it is particularly well adapted for sowing with Orchard and Tall Meadow Grass, as it ripens at the same time, and sowing these three grasses together will give larger yields and better quality hay than sowing either alone. It is also largely sown with other grasses, both for hay and pasture. When sown by itself, sow 10 to 12 pounds to the acre, either in the spring or fall. 1 lb., 70c; 10 lbs., \$6.50, postpaid.

**Mammoth Red Clover.**—This grows much taller than Medium Red, with larger, leafier stalks. It makes good hay, if cut soon enough, although it has a coarser stem than the Medium Red. Being a rank grower, it is very valuable for fertilizing purposes. The foliage and flower are darker than the Medium Red, and it ripens later and makes only one crop. Especially valuable on light, sandy soil. 1 lb., 70c; 10 lbs., \$6.50, postpaid.

Ask for quantity prices; prices subject to change.





## SUDAN GRASS.

Sudan Grass is the wonder of the age. It is the greatest forage plant ever introduced by the United States Department of Agriculture. It seems to have taken the country by storm.

A sweet, heavy-yielding Grass; absolutely drought-proof; grows successfully everywhere in the South; stock of all kinds eat it greedily; yields more tonnage than any other forage crop per acre.

Every stockman and experiment farm that has tested this Grass states that it is fine hay and stock eat it in preference to Alfalfa. It analyzes over 9 per cent protein.

We are now prepared to supply our customers with the highest quality of seed, and want you to test out this wonderful new crop this season.

**The Origin of the Seed.**—In the year 1909 a small amount of this seed was brought into this country from Sudan, Egypt, by the United States Department of Agriculture. It has been thoroughly tested since its introduction in many sections of the United States—everywhere a success.

Sudan Grass is probably the wild original form of the cultivated Sorghums. It is a tall annual Grass, growing under favorable conditions, to a height of 6 to 10 feet, but when broadcasted thickly it grows only 4 to 6 feet high. The stems are fine, the largest stalks seldom larger than a lead pencil. Where the plants are scattered, they stand abundantly, as many as 100 to 150 stalks coming from a single root. In general appearance Sudan Grass is very much like Johnson Grass, but they are entirely distinct, for Sudan Grass lacks root stalks and therefore never becomes troublesome as a weed. The stems are leafy, erect, and seldom lodging. The Grass cures easily, making hay of excellent quality, which is readily eaten by all kinds of live stock. It has been grown with marked success throughout the semi-arid regions, maturing seed even in South Dakota. It grows well through the humid regions, and from central Missouri southward will ordinarily yield two and three cuttings of hay in a season. It is considerably earlier than the earliest Amber Sorghum, and will mature as far north as the Canadian line.

**Growing the Crop.**—It may be grown either drilled, in cultivated rows, or broadcasted. If planted in cultivated rows, the rows should be as close as possible, and yet permit of easy cultivation. In 24 to 30-inch rows, 2 to 3 pounds of seed per acre is ample; and, under conditions of very low rainfall, this method is recommended. Under humid conditions, 18-inch rows are preferable, and 5 pounds of seed per acre are sufficient. For drilling or broadcasted, 15 pounds of seed per acre should be used. The seed should not be sown until the ground is warm—that is, about the time for planting Corn. The young plants will withstand slight frosts without injury.

**Harvesting the Crop.**—The hay should be cut as soon as the Grass is fully headed, and early cutting is especially advisable where two or more cuttings per season are expected. The Grass can be cut with a mower, but more conveniently with

a binder, especially in dry regions, as the hay cures very readily in bundles.

**Saving the Seed.**—The Grass yields a heavy crop of seed, especially in cultivated rows. If the seed is grown for commercial purposes, it is highly important that it be grown on land not infested with Johnson Grass, as the seeds of the two are distinguishable only with difficulty. It is recommended that, in growing for seed only, it be cultivated in rows, taking great care to hoe out and eliminate any Johnson Grass or other weeds, etc., that may show in the Sudan Grass. It crosses very readily with all the cultivated varieties of Sorghum and when it grows near any such variety more or less numerous hybrid plants will appear in the progeny. These hybrids do no harm in fields intended for hay, but where a crop is to be harvested for seed the hybrid plants should be rogued out. This should be done preferably as soon as the hybrids appear in bloom, so as to prevent further crossing in the field; but in any event it should be done before the Sudan Grass is harvested. Sudan Grass seed weighs about 32 pounds to the bushel.

Sudan Grass, without doubt, has solved the hay question. It is the greatest drought-resistant forage crop known. At the same time it does not blight where the moisture is heavy, and under good seasonable conditions it yields a larger tonnage of hay per acre than any other crop known. It recovers rapidly after cutting, and the next crop is usually ready for harvest within thirty days from the first cutting. Sudan Grass has solved the hay question wherever grown. Farmers are looking for a crop with both a feeding value and a market value. This country has never produced enough good hay. Good hay always brings splendid returns. Hay is the best forage and the most convenient to handle. Sudan Grass is a great producing crop, both in quality and yield, and makes a nutritious and palatable hay, which is greatly relished by cattle, horses, and other farm stock. In feeding value, the hay is second to Alfalfa and far better than Millet, which is usually grown as a "catch" crop. Its yield is also much larger than Millet. 1 lb., 25c; 10 lbs., \$2.25, postpaid.

Prices subject to change without notice.



## CANE AND SORGHUMS.



The possibilities of Cane are almost beyond comprehension. Growing it for ensilage has become an established part of American agriculture and stock-raising. It is one of the very few types that meet the highest expectations.

To the utmost vigilance and mature deliberation of practical farmers in the selection of the most prolific types can be attributed the great popularity of Sorghum, as experience has demonstrated to a mathematical certainty that it is vastly superior to any other. It can be grown to perfection everywhere—in Texas and Manitoba, in Maine and California. There is nothing so good in the sweet Sorghum line as Cane for quick fodder. Sheep relish it, hogs grow fat on it, cattle glory in it, horses will jump wire fence to get into it, chickens—and, in fact, all things living on the farm—are fond of it.

For soiling or green feedings, Cane is of very high value, especially during the summer and autumn, when the pastures are dry and it is hard to find sufficient fodder to keep the animals in a thrifty condition. It is one of the best fodders that can be used to feed growing animals and also the dairy cattle, on account of the flow of excellent milk which it will produce. An acre of Cane often produces as much as 40 tons of green fodder, but the average yield is probably only 20 tons.

Cane makes a grand summer pasture for all kinds of stock, especially for sheep and hogs, when used before it heats out. The hay is very nutritious and is relished by all kinds of stock, including hogs. The yield of cured hay is about 12 to 15 tons per acre. Cut when heading out, leave for two or three days on the ground and then put up in shocks. The silage made of Cane is exceptionally nutritious. It is best cut for silage when the seeds begin to harden, as if cut in too immature condition it is liable to become sour. Cow Peas and Soy Beans are quite often mixed with Cane for the silo. This will greatly increase the feeding value. As a "catch" crop, Cane is frequently used. It can be sown in mid-summer after an early grain crop or can be planted in place of other crops if they have been destroyed by hail, food, or insects.

**Texas Seed Ribbon Cane.**—For syrup, forage, and ensilage. One of the best varieties that you can plant for syrup purposes. Every planter who has tried this wonderful variety is more than well pleased; and for the increasing demand of ensilage crops you cannot find a Sorghum that will give you more universal satisfaction. The superiority of this Cane over other Sorghums is so great that when once grown it always will be planted, whether for forage, ensilage, or syrup. The stalks grow from 12 to 15 feet high, being ready to cut and grind the latter part of August, while common Cane is not usually ready to cut before October. Cut with the foliage and run through the mill, it makes the finest kind of ensilage for all kinds of stock. The yield of molasses is from 250 to 400 gallons per acre. It will grow anywhere that Sorghum will grow. In planting, prepare the ground and cultivate the same as for Sorghum. Plant in rows 3½ feet apart; 6 to 8 pounds will plant an acre if planted in drills. The Seeded Ribbon Cane is sweeter than the Orange, the syrup lighter colored. 1 lb., 15c; 10 lbs., \$1.00.

**Early Amber.**—This is the quickest-maturing variety of the sweet Sorghums, and was formerly the variety most generally grown for syrup and for forage. It is still preferred in the Northern States because of its earliness, but in the Southwest Red Top has proven to be a heavier producer. 1 lb., 15c; 10 lbs., \$1.00, postpaid.

**Orange.**—This is also an old and popular variety for both syrup and forage. Usually matures ten to fourteen days later than Amber. 1 lb., 15c; 10 lbs., \$1.00, postpaid.

**Red Top or Sumac.**—Of the many varieties of sweet Sorghums, Red Top or Sumac is the one most generally grown. It is vigorous and drought-resistant, and makes larger yields than any other sweet Sorghum. The seeds are red to orange yellow. 1 lb., 15c; 10 lbs., \$1.00, postpaid.

**Sapling.**—("Straight Neck Texas Seeded Ribbon Cane.") Also often incorrectly referred to as a "Ribbon Cane" by enterprising seedsmen, who find that there is no law against selling old well-known varieties under new names. It's just as good for syrup or silage under either name. Growth is tall, vigorous, and rank, like the Honey Drip and Goose Neck, but the heads, with pale amber-colored grains, stand up, as in the Honey. 1 lb., 20c; 10 lbs., \$1.50, postpaid.

**Honey.**—("Japanese Seeded Ribbon Cane.") This variety of the sweet Sorghums has been widely sold as Japanese Cane. It has long, slender, reddish heads, and matures in 120 to 125 days, and is especially desirable for syrup-making. It is also highly prized as a forage crop, valuable for filling silos. 1 lb., 15c; 10 lbs., \$1.25, postpaid.

**Crook Neck.**—("Texas Seeded Ribbon Cane.") Also called "Goose Neck." This is an old and well-known sweet Sorghum that has been incorrectly sold as Seeded Ribbon Cane. It is a very rank and vigorous-growing Sorghum, making a heavy and exceedingly juicy stalk and a large yield of syrup. It matures late, but makes heavy yields of green forage for feeding live stock or for filling silos. It grows 10 to 15 feet high and produces large, heavy, oval-shaped, dark-seeded pendant heads, hence its original name, "Crook Neck." 1 lb., 20c; 10 lbs., \$1.50, postpaid.

**Honey Syrup Cane.**—The favorite syrup-producer. As a syrup-producer it has no equal, being exceedingly juicy and sweet, making from 300 to 600 gallons per acre, highly flavored. It grows 10 to 12 feet high, is very prolific, sometimes producing five to seven stalks from one seed. Matures about the middle of August to October, owing to time of planting, will keep green and stand, if desired, until killed by frost, allowing the farmer to take his own time to harvest for syrup. 1 lb., 20c; 10 lbs., \$1.50, postpaid.

**Southern Cane.**—This variety does not mature so early as the Minnesota Sorghum, but the yield is very much heavier. When Sorghum is grown for fodder only, the Southern Cane will give the greatest tonnage and is usually grown on that account by dairymen to feed their milch cows. All kinds of stock eat it readily. Southern Cane is not suitable for making syrup when grown in the North, but for feed it is splendid. 1 lb., 20c; 10 lbs., \$1.50, postpaid.

Ask for quantity prices.



MILLET.

Millet is an important and nutritious hay and forage crop—splendid for dairy cows, young stock, and sheep, and yields heavily. It is easily cured, and its rapid growth makes it a splendid "catch" crop. Now broadcast at the rate of 1 bushel to the acre. It matures from six to eight weeks after seeding; can be planted from April until August, but not too early. Cut while in bloom, before the seed hardens in the head. Two crops can be grown on the same land.

**Golden Millet.**—Formerly called German Millet. True Southern-grown seed. In the North Millet is sown almost altogether for hay and for that purpose Southern-grown seed is much the best. It grows taller than does that from Northern seed and that means more hay. It is finer than that from Northern seed and that means better hay. Millet seed produced in the North even from Southern seed becomes what we call Comm. on Millet. Not only does the plant change in character, becoming coarser and much more dwarf, but the seed itself shows a change and is readily distinguished by those experienced in handling it. Golden Millet is very sweet and palatable and when fed to dairy cows produces a large amount of milk. On good rich soil it grows 4 to 5 feet high. It is very tender if cut at the right stage, which is when it is in full bloom. About  $\frac{3}{4}$  of a bushel of seed is sown to the acre. A good yield is 3 to 5 tons of hay to acre. 1 lb., 15c; 10 lbs., \$1.00, postpaid.

**Japanese Millet.**—Inproperly called Bihon Dollar Grass. Entirely distinct from all other Millets. It grows from 6 to 9 feet high, stands up remarkably, and yields enormous crops. When cured it makes good hay, and in quality is superior to corn fodder. It is relished by all kinds of stock. It may be sown broadcast at the rate of 15 pounds an acre, but it is better to sow in drills 12 to 18 inches apart, using 10 to 12 pounds to the acre. It does best on low moist ground. 1 lb., 20c; 10 lbs., \$1.50, postpaid.

**Early Russian or New Siberian Millet.**—A new variety imported from Russia. Not so long as the Golden, but about two or three weeks earlier. Because of its quality and earliness, it is sometimes preferred to the Golden. Its strong points are these: It is two weeks earlier than Golden Millet, wonderfully prolific, has great stooling habits, is very leafy and very bushy

## MILLET—Cont.

and full of rich green blades. One kernel has been known to produce fifty fine strong stalks—just the size that are in great demand and eagerly eaten by cattle. It can also be sown after harvesting small grain or early potatoes, a good crop of seed and hay secured, and the ground left in the best possible condition for a crop the following spring. The stalk grows from 2 to 4 feet high, and it is not uncommon to cut 4 tons of hay off an acre. The seeds are of a reddish brown color. Because of its early maturity and hardness, it is very popular in the North and Northwest. Use 35 to 50 pounds of seed per acre. 1 lb., 15c; 10 lbs., \$1.00, postpaid.

**Hog Millet.**—Grows from 3 to 6 feet tall; produces large heads and larger seeds than any other Millet. Seeds contain a high percentage of oil and have a higher feeding value per pound than our common Corn. This plant always produces a heavy head of seed. The seeds furnish the best of all foods for poultry. It has produced as high as 75 bushels of seed per acre. One great feature of this Millet is that the seed ripens before the straw, so that it may be cut and bound as wheat or oats, threshed, and a nice green crop of hay put up, while the seed may be housed and fed separately as grain. This plant is an annual, and, like other Millets, must be planted each season. By beginning to sow with early corn planting and keeping up sowing the first of every month till September first, we can have fine green foliage for stock all summer. 1 lb., 15c; 10 lbs., \$1.00, postpaid.

**Hungarian Millet.**—For good low grounds on rich soil this makes even a more valuable crop than German Millet. It is of fine growth and makes excellent hay. It has numerous succulent leaves, which furnish an abundance of green fodder, taken by all kinds of stock. It is very important to get the true seed, as Common Millet resembles it very closely and is frequently found mixed with Hungarian Millet. 1 lb., 15c; 10 lbs., \$1.00, postpaid.

**Liberty Millet.**—Well known for its quick growth and large heads when growing with an abundance of moisture and sunshine. For seed, sow 6 to 15 pounds per acre; for hay, sow 20 to 40 pounds per acre. 1 lb., 20c; 10 lbs., \$1.50, postpaid.

**Common Millet.**—This is similar to the Liberty Millet, except that the heads are smaller and the seeds lighter colored, and it is earlier. 1 lb., 15c; 10 lbs., \$1.00, postpaid.

## TIMOTHY.

Of hay Grasses, Timothy is one of the most popular, nutritious, and salable. On clay or heavy loams, lowlands, or in mountainous districts, provided there is an abundance of moisture, it produces the very best results. On sandy or light loamy ground it does not do so well as Orchard, Tall Meadow Cut, or Red Top Grass. If grazed or cut too close, the stand of Timothy will be seriously injured, besides it does not form as good grazing as many other Grasses. The yield of hay is from  $1\frac{1}{2}$  to 3 tons per acre. Timothy requires good land to make good crops. It does not root as deeply and is not considered as much of an improver as other Grasses, consequently should not be sown on land deficient in humus or vegetable matter nor on soils of a light or sandy nature. Clovers grow well with Timothy and aid it by supplying nitrogen. Timothy alone, 1 peck (11 pounds) to the acre; or with Clover, 10 pounds Timothy and 6 pounds Clover; a splendid mixture is 8 pounds Timothy, 6 pounds Clover (either Mammoth Clover or Alsike Clover preferred, as they mature at the same time as Timothy), 6 pounds Fancy Red Top,  $\frac{1}{2}$  bushel Meadow Fescue. Together, these will produce most excellent hay, also nutritious and abundant pasture in good loamy clay or low-ground soils; 8 pounds Timothy and 6 pounds Clover when sown together. 1 lb., 30c; 10 lbs., \$2.50, postpaid.

## RED TOP, OR HERD GRASS.

A valuable Grass for moist rich soils, where it thrives very luxuriantly. It is a good variety to sow with Timothy and Clover for meadow or pasture and is more permanent than either of the other two. It should be fed close, as, if it is allowed to grow up to seed, the cattle dislike it. On good soil it grows about 2 feet high; on poor, gravelly land, about half that height. It has been grown successfully even on alkali land, where other Grasses failed. Red Top is commonly known as Herd Grass, and should be more extensively grown, especially in combination with other Grasses. Red Top is especially adapted to growing on wet soil having an impervious sub-soil. Because of this climate, it is exceptionally well adapted to land inclined to be wet, or on low marshy places. It also grows on dry land. 1 lb., 40c; 10 lbs., \$3.75, postpaid. Ask for quantity prices.

## VETCH, THE SOIL-BUILDER.

Vetch will grow where many Clovers will not grow. Especially is this true of alkali soil, where Vetch does well. It succeeds especially well on sandy soils, and will pay large returns on any soil that is well drained. Vetch is not suitable for Wheat lands or acid soils, but a crop of Vetch could be grown on almost every farm in any community and prove to be a big-paying proposition.

Vetches are a very hardy crop. Especially is this true of Hairy Vetch, as it withstands the severe winters of Michigan, New York, and even the New England States. This factor alone makes it desirable in sections where hay and pasture crops often winter-kill. This crop when sown in the fall will grow rapidly, the rate depending somewhat on the season and soil conditions. It will remain green and give excellent pasturage after nearly all the plants have been killed by the frost, and it will be the first thing green in the spring. Bear in mind that Vetch is adapted to the whole United States of America.

**Time of Seeding.**—The time of seeding differs in sections, but there is scarcely a point in our country where fall sowing does not give excellent results.

**Value of Vetch for Feeding.**—If you want to know the value of Vetch for feeding purposes, study this table.

Name of Feed.	Digestible Nutrition in 100 Pounds.			Fertilizer Constituted in 100 Pounds.		
	Crude protein, Lbs.	Carbohydrates, Lbs.	Fats, Lbs.	Nitrogen, Lbs.	Phosphoric Acid, Lbs.	Potash, Lbs.
Clover ..	7.1	37.8	1.8	19.7	5.5	18.7
Crimson Clover ..	10.5	34.9	1.2	24.3	4.0	13.1
Alfalfa ..	11.1	39.1	0.6	24.7	6.1	17.9
Wheat ..	11.9	42.0	2.5	...	...	...
Vetch ..	11.9	40.7	1.6	27.2	9.7	24.4

You know the crops we compare it with. Note especially how near to wheat bran it is in feeding value and how it excels in fertilizing.

Vetch is one of the richest legumes in feeding value, and has become known as the King of Soil-builders.

Vetch is sown in the spring or fall in the Central and Northern States and only in the fall in the Southern States. Spring sowing in the Southern States oftentimes is not successful, on account of the heat.

Hairy Vetch is a valuable plant, and if you wish to use for hay, sow it with Rye or some similar crop to support the vines; for pasture it can be sown alone. The amount of seed used varies from 25 to 35 pounds to the acre.

**Spring Vetch.**—A very productive and highly nutritious plant; excellent to cut green for soiling or made into hay; splendid feed for cattle and stock of all kinds. We find an ever-increasing demand for Spring Vetch, as more is being used for plowing under. It has the advantage over Peas in that it makes a greater growth of vine; while, as the seed is much smaller, a less quantity is required to plant an acre. Furthermore, this plant is adapted to the North much better and is unquestionably superior on this account.

Spring Vetch should be sown only in the spring, as it is not hardy so as to permit fall sowing, except in the extreme South. Our prices are most reasonable, and we would urge you to send us your order. 1 lb., 25¢; 10 lbs., \$2.25, postpaid.

**Seed or Winter Vetch.**—A very valuable forage plant. It is very hardy, is valuable as a winter cover crop to prevent leaching and for forage and fertilizing purposes. It is an annual, but re-sows itself, and will come up year after year on the same ground. It succeeds well on nearly all soils and thrives surprisingly on poor light land and will endure extremes of drought, heat, and cold. It improves the soil. It may be sown either in the spring or fall with about half a bushel for Rye or Oats for support. It grows rapidly, and is particularly valuable in sections where Clover does not thrive. When sown in April or May, it can be cut in July, the second growth affording excellent pasture during the summer. The yield of green fodder is from 12 to 20 tons an acre. 1 lb., 25¢; 10 lbs., \$2.25, postpaid.

Ask for quantity prices.

## GRASS MIXTURES FOR HAY AND PASTURE.

These mixtures are especially blended with a view to secure the largest possible yields. All the Grasses are permanent when once established. They will last indefinitely if occasionally top-dressed.

All authorities agree that for pasture and hay the best results are obtained from the use of Grass seeds in species. The reasons are obvious. First, a number of species will insure a much denser growth than the same kind of seeds of one or two species and prove less exhausting to the soil, since they live to a large extent on the same constituents; second, seasons that affect some Grasses adversely are favorable to other sorts, so that with a mixture failure is practically impossible, provided, of course, the seed is good. We take great pains in selecting Grass seeds in order to secure the highest germination, and mixtures are based on a full appreciation of the requirements of the different soils for which they are intended.

Experience has proven beyond a doubt that a mixture of Grasses produces a better meadow and makes a better permanent pasture than a combination of Timothy and Clover. While Timothy is a splendid Grass, and Clover the foundation of all successful farming, neither are permanent nor well adapted to pasturing. Both are affected by drought and frost, thereby making it necessary to resow every few years—rather an expensive method. Timothy and Clover last but a few years, while a good permanent pasture will last ten or even twenty years.

For every different kind and condition of soil there are a number of Grasses which are especially suitable. Some kinds do best on high ground and flourish in dry weather, others do well on low ground and where there is plenty of moisture. Some varieties are so early in maturing, others are so late, that if a mixture of Grasses is used there will be no time from early spring until snow covers the ground that one species or another will not be at its best.

Meadows sown with carefully selected Grass-Clover mixtures will occupy the ground more closely and will produce a better quality as well as a larger yield of hay and subsequent fall pasturage than can be secured from fields sown with Timothy and Clover alone. 1 lb., 60¢; 10 lbs., \$5.50, postpaid.

**Clover, Alsike, and Timothy.**—This mixture has met with the hearty approval of our trade and the demand for it is growing tremendously. It combines the distinct features of our other two famous mixtures. It contains the same proportion of Timothy and divides the Clovers about equally. In this mixture you secure the fine-stemmed, palatable Alsike, which makes the first hay, and the Red Clover, which grows a little longer, forming a hay exceedingly rich in Clover or protein food. The price comes between the two, being \$7.75 for a bushel of 50 pounds. It is sown at the same rate of around 12 pounds to the acre, and like the other mixtures, we consider it superior in many ways to Timothy alone. 1 lb., 60¢; 10 lbs., \$5.50, postpaid.

**Meadow Mixture.**—For both hay and permanent pasture. It affords enormous crops of hay of the finest quality and highest feeding value, and after this has been cut it furnishes continuous and abundant pasturage of the richest and most nutritious character until winter sets in. It will stand for years and pasturage, as used either for pasturage exclusively or hay and pasturage, as varying conditions may suggest. It contains Mammoth Red, Medium Red, Alsike, and White Clover, and Perennial Rye Grass, Kentucky Blue Grass, Meadow Fescue, and a spreading character of many of the varieties employed. Fields sown with this mixture will, during periods of drought, look fresh and green while other meadows and pastures are dry and burned. We recommend at least 30 pounds to the acre. 1 lb., 60¢; 10 lbs., \$5.50, postpaid.

**Method of Sowing.**—The amount of seed sown depends on the nature of the soil and location. Some prefer sowing Grass seed alone. We think that a crop of Spring Wheat, Barley, or Oats can be profitably as a nurse crop. However, do not seed too heavily with the grain.

**RYE.**

**Winter Rye.**—Experience with drought and winter-killing during the past two years has led farmers to seek a crop which would be proof against these. Winter Rye is, without doubt, a crop which will endure the most punishment from extremes of heat, cold, and drought of any crop now grown.

Thus far comparatively little Rye has been raised, chiefly for two reasons: first, the lack of knowledge of its qualities; second, the discouragingly low prices paid by the elevators. This low price has not been due to a desire for extra profits on the part of the elevators, but rather on account of the limited production and consequent increased cost in handling.

Much can be said in favor of Rye as a forage crop. On account of its rapid growth, it affords excellent pasture, both fall and spring. It can be pastured very late in the spring and then produces a very good crop of grain. Ask for prices.

**Spring Rye.**—This new variety of Rye is very much in demand, and our stock is the true, genuine Spring Rye that is so generally demanded. This heavy-yielding Rye is of recent introduction and it has proved to be to the farmer a splendid money-making crop. The advantages of Spring Rye are many, the most important being its heavy-yielding qualities, as well as the fact that it can be sown as a "catch" crop late in the season very successfully. It has been known to be sowed as late as May first and still make a good crop. However, for best results it should be seeded early in the spring, as it will stand earlier sowing than Spring Wheat. Many of the best customers use it as a pasture crop. Nothing superior for early pasture, and especially recommended for hog pasture. Anyone who is short of pasture will do well to sow five or ten acres of Spring Rye, sowing some Vetch and Canada Peas with it, for it can be pastured considerably and later a crop of hay cut, if stock are taken off in time. If you wish to grow Spring Rye as a grain crop, you can expect a yield of from 40 to 60 bushels to the acre; and, as you know, Rye makes the very best of feed. If, however, there is a shortage of Wheat, it is best to use the crop for flour, as Rye flour is in demand and makes splendid bread.

Spring Rye is entirely distinct from Winter Rye. It can be sown in the spring a little later even than most other spring grain and a crop harvested the same season. There is more and more demand for the seed each year, as farmers are finding out the value of this crop and the convenience of being able to sow Rye in the spring. It grows a tall strong straw 6 feet high and produces 40 to 60 bushels per acre.

There is no question about the value of Spring Rye. The main thing is to send early for your seed. Those who know about its value no doubt will order immediately upon receipt of catalogue. If you have never grown this crop or do not know of its value, send an order and sow a few acres this spring. You will be delighted with the crop, whether used for pasture or as a grain crop.

Our seed is new stock, thoroughly re-cleaned, free from noxious weeds, and as fine stock as you can wish for. Be sure to place your order promptly and have the seed on hand ready to sow. Ask for prices.

**ORCHARD GRASS.**

There is much to be said about the desirability of Orchard Grass, and while it does not meet every requirement, it has advantage for many sections and for many fields. No other Grass will give equal results. The demand for Orchard Grass the past few years has been gradually increasing, as the farm journals and experimental stations have been advertising the use of it and explaining its virtues. It is an exceptionally valuable Grass for pasture or hay land and, on account of its earliness, especially valuable for a permanent pasture. It furnishes green grass very early in the spring and until late in the fall. When closely cropped, it grows up very quickly, and is ready for grazing in ten or twelve days. When grown for hay, more than one crop can be obtained in one season, and when only one crop is cut the aftergrowth is very heavy and gives splendid and rich pasture till late in the fall. The roots extending to a great depth, it will stand drought better than most other Grasses and is very hardy. It grows in tufts, and is therefore best sown with other Grasses. It is well suited for shady places, such as orchards and groves. It grows on all kinds of land, but does best on deep, rich sandy loam or clay soils. Height, 3 feet. It flowers in June about the same time as Red Clover and is often grown with it. It blooms three weeks earlier than Timothy. 1 lb., 50c, postpaid.

**ENGLISH BLUE GRASS, OR MEADOW FESCUE.**

This Grass is not grown extensively, as farmers have not come to realize its value, especially if they would get to using a perennial mixture for pasture purposes.

Next to Kentucky or Southwestern Iowa Blue Grass, it is becoming very popular, and its growth is increasing each year. It is especially adapted for a permanent pasture. It is one of the standard English Grasses, growing from 2 to 3 feet high, but not in tufts like Orchard Grass. It is the most nutritious of all Grasses. It is a most persistent grower, resists drought and cold winters, makes good hay, and cattle thrive on it, whether in a green or dry state. It succeeds even on poor soil, and as the roots penetrate deeply (from 12 to 15 inches), it takes extremely dry weather to affect it. It will stand more freezing than any other variety, and yields an abundant crop of seed. It is a profitable seed crop, and in some parts of the country hundreds of carloads are threshed yearly, and a quantity of the seed shipped to Europe. It is a Grass that should be sown more extensively, and we hope to see more of our farmers raising this very profitable crop. It will succeed on any good corn land, but thrives best on rich, heavy soil—even gum land will make a good crop. Sowing may be done in the spring or fall and is usually done with a wheat drill. The ground should be well prepared by plowing some time before sowing and allowed to settle. The seed should be put as near the surface as possible. One bushel (24 pounds) of seed is required to sow an acre. The crop is ready for harvesting in July and is usually cut with the self-binder and threshed from the shock. The straw makes winter forage, and the aftermath furnishes good pasture the rest of the summer.

You will find Meadow Fescue to be a very valuable Grass to have on your farm. It is rich in feeding value, and does not winter-kill very easily. It is adapted to all kinds of soils, excepting those that are too dry, and we urge you to at least try a small acreage of it this year.

1 lb., 45c; 10 lbs., \$4.00, postpaid.

**BROMUS INERMIS.**

**Bromus Inermis, or Hungarian Brome Grass.**—This is a very valuable Grass for permanent pastures or meadows. It is a very hardy plant, withstanding the extremes of heat and cold in an extraordinary manner. It is also a great drought-resister, and in many dry sections is practically the only Grass that will give satisfactory results. In localities that have an ample supply of rainfall, it bears very heavy yields of hay.

The feeding value of this Grass is excellent, and is relished by all stock.

We have handled Bromus for several years, and our sales on this Grass are increasing very rapidly, showing that the plant is gaining in popularity on account of its great merit.

The seeds are quite large, and it requires about 20 pounds of seed to the acre. The best results are obtained by preparing the seed-bed carefully and harrowing the seed in thoroughly.

Bromus is really a wonderful Grass, and we strongly urge you to sow it, even if only one acre, to prove its remarkable yielding qualities.

Our stock is not large, but quality is good. Fall seeding is usually most successful in most sections.

It originated in Russia, and is recommended on account of the manner in which it has stood on the Hungarian plains, where the dry, sterile nature of the country and the long-continued droughts make so many plants succumb. This, however, stands well, and has been known for thirty years to stand when such robust crops as Alfalfa have been destroyed. It blooms in the Northern States in June and earlier in the Southern. It gives a luxuriant crop, particularly on fresh sandy loam soil. It is found that animals eat it greedily, whether in the green or dry state, so that it can be used as mown or saved for winter use. The seed may be sown in the early spring or in the autumn with Winter Wheat, as it stands intense cold equally well. It will stand under favorable conditions for years, and give as much food in one month as Alfalfa gives in three months.

1 lb., 60c; 10 lbs., \$5.50, postpaid.

Ask for quantity prices.



## LAWN GRASS MIXTURES.

Prices on Grass seeds subject to change. The pound prices include postage; 100-pound prices are by freight or express at purchaser's expense. (Not less than 25 pounds at the 100-pound rate.)

The essentials for a fine lawn are: First, a rich, well-drained soil; second, careful preparation of the ground, making it as fine and smooth and mellow as possible; third, a wise selection of seeds; fourth, sowing at such a time as to give the young plants a chance to become well established before being subjected to very dry or cold weather or to the direct rays of the hot summer sun. However much care is bestowed on the soil and seed, no lawn will be beautiful without frequent mowing and rolling. Too much care cannot be bestowed upon the selection of Grasses, as some varieties are the most luxuriant in spring, others in summer, others again in autumn, and a combination of the proper sorts is required for a perfect, carpet-like lawn. It may be planted early in spring or fall, and should be sown at the rate of 60 to 100 pounds per acre. If sown in the spring, sow as early as possible, making the surface very fine and smooth, then raking it over and sowing the seed just before a rain, which, if the surface has just been raked, will cover the seed sufficiently. For fall seeding, sow before the autumn rains and early enough to enable the young grass to become well established before very cold weather, when a light dressing of manure should be given.

**Extra Fine Mixed.**—(Riverside Park Mixture.) We have given much thought and made many experiments to secure the best selection, and think our Riverside Park Mixture is the best possible for shaded lawns. One pound is the minimum quantity, sufficient to sow 600 square feet. 1 lb., 65c; 10 lbs., \$6.25, postpaid.

**Fine Mixed Lawn Grass.**—A thoroughly first-class Mixture, made of the best and cleanest grades of those varieties used and best adapted to general lawn purposes. 1 lb., 50c; 10 lbs., \$4.75, postpaid.

### FOR SUNNY LAWNS.

**Prairie Mixture.**—While there are on the market numerous ready-prepared golf Mixtures of more or less value, we have found that the best results are obtained by giving individual attention to each customer and making a special Mixture to suit his needs. Write us a description of your links, telling what the nature of the soil is, how drained, how much it has the sun, whether the winters are long or open, and whether the summers are wet or dry, and we will offer you two or more Mixtures especially adapted to the various parts of your grounds. 1 lb., 65c; 10 lbs., \$6.25, postpaid.

## LAWN GRASS SEED.

**Kentucky Blue Grass.**—It has been thoroughly demonstrated that the soil of Kansas is as well adapted for raising Blue Grass as that of Kentucky; we have the facilities for harvesting and caring for the seed, and a market for distributing it lies at our door. The seed raised here is fully equal to that raised in any other part of the country, the germinating qualities of it being above the average of the seed usually shipped in. Possessing all these natural advantages.

In connection with White Clover, Blue Grass forms the finest and closest lawns; for this purpose an extra quantity of seed should be used—say 3 bushels of Blue Grass and 2 pounds of White Clover per acre or 1 pound for 150 feet; if sown by itself for pasture, 14 pounds is sufficient. Sow early in the spring or during the months of September and October. 1 lb., 50c; 10 lbs., \$4.75, postpaid.

**English Blue Grass or Meadow Fescue.**—All points considered, this Grass must be regarded as one of the most valuable Grasses that can be sown anywhere in this country. Its most important features are that it is drought-resisting, frost-resisting, and furnishes an abundance of pasture early in the spring and late in the fall, when other Grasses have not come up or have died out. It is suited to a wide range of soils—does well on loamy, clay, and gravelly soils, and thrives on heavy black loam, and strong and low-lying soils. In wet places in a pasture when trampled down by the stock, where Timothy, Red Clover, and Kentucky Blue Grass fail, Meadow Fescue is the only Grass that will keep these places productive, and no amount of trampling is able to destroy it. It is not adapted to light, sandy soils.

Meadow Fescue is of the greatest value if sown in connection with other Grasses; and as farmers realize the value of mixtures of perennial Grasses for pastures or meadows, the demand for Meadow Fescue will be greatly increased, mainly because it is so sure to grow and come up quickly, keeping the weeds down and furnishing forage while the weaker Grasses are getting started. Meadow Fescue matures at the same time as Timothy and Red Top and Alsike Clover, and for meadows these varieties are often grown together. It is easily exterminated. When plowed up, it is dead for keeps. Sow 10 to 15 pounds per acre broadcast without a nurse crop. 1 lb., 45c; 10 lbs., \$4.00, postpaid.

**Australian Blue Grass.**—Resembles somewhat the Kentucky Blue Grass. It will thrive even on hard clay soil, where there is not quite enough lime and fertility for Kentucky Blue Grass, and, having an excellent root development, forms a heavy turf. 1 lb., 45c; 10 lbs., \$4.00, postpaid.

**Bermuda Grass.**—Peculiarly adapted to the Southern States. A delicate Grass, valuable alike for pasture and hay crop. Grows on any soil. Oklahoma Experiment Station recommends it highly. It does well in the south part of Kansas and Southern States generally. A dry weather Grass, and is splendid to bind loose soils together. Propagate by division of the roots or sow the seed in amounts of 5 to 6 pounds to the acre. Sow from April to June. 1 lb., 90c; postpaid.

**White Clover.**—This is a low, close-growing Clover, with round white heads, and very fragrant; excellent for pasture, and when mixed with Kentucky Blue Grass makes the finest kind of a lawn and is universally used for this purpose in the United States. It also makes excellent pasture, and is very nutritious for sheep and cattle. It does well on almost any soil. Sow 5 to 8 pounds per acre alone for pasture; for lawn 1 pound to 400 square feet. 1 lb., 90c; 3 lbs., \$2.60, postpaid.



Ask for quantity prices.

## FLOWERS - BULBS - VINES - ROSES.

Our collection of Flower Seeds includes the best strains from the largest growers in America and Europe. Every variety of value will be found in this list, and the seed can be depended upon as fresh and pure. **Prices on Flower Seed are postpaid.**

Directions for planting and culture printed on each package of Flower Seed.



**GRAND PRIZE VICTORIA ASTERS.**

Magnificent flowers, massive and showy, with regular overlapping petals double clear to the center. The flowers measure 4 to 5 inches across, and the colors include many extremely delicate and some gorgeous shades. The plants grow very evenly, about 18 inches high, and carry from 25 to 40 flowers, on a plant.

It would seem as if the highest possible perfection had been attained in these truly grand Asters. The flowers are of immense size, often 4 inches across, composed of long, wavy, twisted petals, gracefully formed into loose yet densely double ball-globes, resembling some of the finer Japanese Chrysanthemums.

**GIANT COMET**—Mixed; Crimson; White; Rose Pink; Deep Blue; Lavender; Bride; White, changing to Rose. Pkt., 10c, postpaid.

### ALYSSUM, SWEET.

**LITTLE GEM**.—Very dwarf; only 3 to 4 inches in height. A single plant will cover a space a foot in diameter; blooms from spring until fall; very fragrant. Pkt., 5c, postpaid.

### ANTIRRHINUM—SNAPDRAGON.

**QUEEN VICTORIA**.—The best of the tall-growing white Snapdragons. The plants (3 feet) produce beautiful, large, white flowers on long slender stems the entire season. Pkt., 10c, postpaid.

**TALL SORTS**.—Mixed. Pkt., 5c, postpaid.

**BALSAM (Lady Slipper)**.—Improved double Camelia-flowered. A family of beautiful annuals, large showy flowers, fine mixed. Pkt., 10c, postpaid.

**BALSAM**.—Improved double Camelia-flowered; pure white. Pkt., 10c, postpaid.

**BALSAM**.—Rose-flowered; double, mixed. Pkt., 10c, postpaid.

**BALLOON VINE**.—Pkt., 10c, postpaid.

**BALSAM APPLE**.—Very curious, small and dense climbers, with ornamental foliage and golden yellow fruit, which opens when ripe, showing the seed and blood-red inside. Pkt., 10c, postpaid.

**BACHELOR'S BUTTONS (Centauria Cyanus)**.—Our strain of this splendid annual is especially fine. The true old-fashioned Bachelor's Buttons. Pkt., 10c, postpaid.



**Festiva Maxima. Fragrant, the Favorite Peony.**

**CALEDONIA (Pot Marigold)**.—1 foot. A perpetual bloomer. The flowers are Oriental in color and exhibit every shade of yellow from ivory to deepest orange. Makes good cut-flowers and the dried blossom may be used to flavor soups or stews. Pkt., 10c.

**CALLOPIS, OR COREOPSIS**.—One of the leading plants for the flower garden, making a very showy border plant, producing flowers in nearly every shade of yellow, orange, crimson, red, and brown. Sow where they are to remain, and thin to 1 foot apart. Mixed. Pkt., 10c.

**CAMPANULA (Canterbury Bells)**.—Medium, 3 1/4 feet. Campanulas remain one of the prettiest of old garden plants. Their bell-shaped flowers in their delicate coloring make them the admiration of all. Double and single mixed. Pkt., 10c.

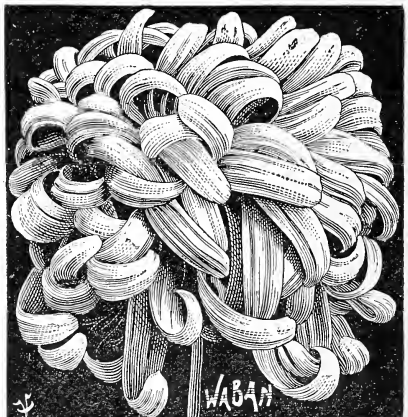
**CANARY BIRD FLOWER (Tropaeolum Canariense)**.—A beautiful climber with small, curiously shaped, canary-colored blossoms. Will bloom freely from July until killed by frost. Tender annual; height about 20 feet. Pkt., 10c.

**CANDYTUFF—GIANT HYACINTH-FLOWERED**.—An improved strain, producing immense trusses of bloom, frequently measuring 6 inches in length by 3 inches through. Very similar in shape to a Dutch Hyacinth. Fine for hedging and cutting. We offer the choicest sorts. Splendid. Pkt., 5c.

**CHRYSANTHEMUM**.—Annual varieties 2 feet. Showy and effective garden favorites, extensively grown for cut flowers. Pkt., 10c.

**COSMOS**.—Of quick growth, the plants make large bushes fully 5 feet high with a mass of elegant foliage. From September until November each plant is covered with hundreds of showy flowers. Finest mixed. Pkt., 10c.

**CYPRESS VINE**.—10 feet. For training upon a light ornamental trellis, the Cypress Vine can be excelled. It has a profusion of scarlet or white star-shaped blossoms and its finely-cut foliage is particularly adapted to ornamental work. Pkt., 10c.



**Victoria Aster.**

**ABSOLUTELY HARDY. A DAISY BED LIVES PERPETUALLY AND GROWS MORE BEAUTIFUL EACH YEAR.**

**THE NEW SHASTA DAISY**.—Is one of the finest hardy perennials for permanent garden decoration; a bushy growth, bearing in profusion throughout the season white, Daisy flowers 4 inches across on stems 2 feet long. Pkt., 15c, postpaid. Plants not prepaid.

**DOUBLE DAISY**.—One of the most charming of our early spring flowers. It is a perennial plant, quite hardy, of easy culture, but requires shade. Pkt., 10c, postpaid.

**DIANTHUS (or Garden Pink)**.—A very near relative to the Carnation. Of many varieties and bright and delicate colors. Delicately and deliciously sweet-scented. Succeeds well in pots for winter culture, or sow early in spring in hot-beds and transplant into open ground. Pkt., 10c, prepaid.

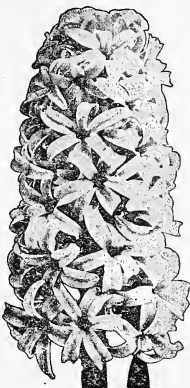
**DOLICHOES LABLAB (Hyacinth Bean)**.—A rapid-growing climber of easy culture, bearing a profusion of pea-shaped purple blossoms. The seed are of a beautiful deep purple shade in the fall. Mixed. Pkt., 5c, prepaid.

**ESCHSCHOLTZIA (California Poppies)**.—A most beautiful showy garden flower. Easy grown extra varieties. Mixed. Pkt., 5c, prepaid.

**FORGET-ME-NOT (Myosotis Alpestris)**.—A favorite old-fashioned flower bearing in profusion clusters of blue blossoms. Mixed. Pkt., 10c, prepaid.

**FEVERFEW (Matricaria Capensis)**.—Handsome double white flower. Pkt., 10c, prepaid.

## FLOWERS—Continued.



Hyacinth.

## SUMMER FLOWERING BULBS.

## CANNAS.

These are the showiest bedding plants grown. From a list of over 100 varieties grown at our own green-house, we have selected the following as the best in their respective colors. We can supply all the standard varieties, but would especially recommend those listed here.

**KING HUMBERT.**—The Royal Red Canna. A brilliant orange-scarlet with bright red shadings. Large trusses of blooms, the individual flowers being 6 inches in diameter. Foliage a rich reddish bronze, with lighter shadings. The finest red foliage and flowering variety grown. Height, 5 feet. Each, 15c; 3 for 40c, postpaid.

**AMERICA.**—Glowing red, flamed purple. Each, 15c; 3 for 40c, postpaid.

**CHARLES HENDERSON.**—Deep rich crimson, green foliage. One of the finest bedding varieties in existence. Height, 4 feet. Each, 15c; 3 for 40c, postpaid.

**BURBANK.**—A giant orchid-flowered Canna. Clear yellow, enormous in size and stems double; shows some crimson on inner side of petals. Height, 5 feet. Each, 15c; 3 for 40c, postpaid.

**CHICAGO.**—Bright vermilion-scarlet. A line bedder. Each, 15c; 3 for 40c, postpaid.

**EGANDALE.**—Fine dark-leaved variety, flowers of a soft currant red. Each, 15c; 3 for 40c, postpaid.

**SHEMANDOAH.**—Deeprosy pink, green foliage. Height, 4 feet. Each, 15c; 3 for 40c, postpaid.

**MARTHA WASHINGTON.**—Bright rose, green foliage. Height, 3 feet. Each, 15c; 3 for 40c, postpaid.

**FLORENCE VAUGHAN.**—Rich golden yellow, dotted with bright red. Height, 5 feet. Each, 15c; 3 for 40c, postpaid.

**MADAME CROZY.**—Large vermilion flowers, bordered with golden yellow. Height, 3½ feet. Each, 15c; 3 for 40c, postpaid.

**PRESIDENT CARNOT.**—Deep red, bronze foliage. Height, 5 feet. Each, 15c; 3 for 40c, postpaid.

**QUEEN CHARLOTTE.**—A grand Canna, with distinct golden belt around each petal, the center brilliant orange-scarlet with crimson tones. Each, 15c; 3 for 40c, postpaid.

**SCARLET-FLOWERING SORTS.**—Many splendid colors. Each, 15c; 3 for 40c, postpaid.

**YELLOW-FLOWERING SORTS.**—Variegated, banded, etc. Each, 15c; 3 for 40c, postpaid.

## GLADIOLUS.

**AMERICA.**—A splendid new Gladiolus. The color is a soft pink, very much like the Embarras Carnation, except slightly tinged with lavender, effecting a perfect color harmony. A splendid bedding sort and an excellent cut flower. Extra large bulbs. Each, 10c; dozen, 60c, postpaid. Pink, Red, Yellow, Mixed, 60c dozen, postpaid.

## ELEPHANT'S EAR.

**CALADIUM ESCULENTUM** (Elephant's Ear).—One of the most effective plants in cultivation, for planting out upon the lawn. It can be made to produce three to ten handsome leaves, often 3 feet long and 30 inches wide. You can not make the soil too rich or keep it too wet.

First size bulbs, 25c each; second size bulbs 20c each; third size bulbs, 15c each, postpaid.

**MAMMOTH BULBS.**—Each, 40c, postpaid.

## DAHLIAS.

Prices, unless otherwise noted, 15c each, postpaid.

**ALEWINE.**—Delicate pink, tipped purple.

**ALICE EMILY.**—Buff-yellow, tipped white.

**ARRAN DE POGUE.**—Maroon, perfect form.

**ARSTAN.**—Soft brick red, shaded apricot. Remarkable for its free and early flowering.

**DR. J. P. KIRTLAND.**—Very large bloom; dark, velvety crimson.

**STORM KING.**—The finest of all white Show Dahlias, an extremely early, profuse, and constant bloomer. A strong, vigorous grower of branching habit; producing large, perfect flowers on long, stiff stems. One of the finest whites for cut flowers.

**MRS. BARNES.**—Cactus. A beautiful primrose color. Blossom well formed and a free bloomer.

**MRS. BENNETT.**—Soft crimson. Large, well-built flower.

**AMERICAN BEAUTY.**—Yellow ground, tipped with crimson.

**COPPER KING.**—Light coppery red.

**DOUBLE MIXED LARGE BULBS.**—Each, 15c.

## VINES.

**MADEIRA VINE.**—So well known needs no description. Dozen roots, 40c, postpaid.

**WILD CUCUMBER.**—This is the quickest growing climber on our list. Grows wild, self-sown in many parts of the West. It will grow 30 feet in one season. It is thickly dotted over with pretty, white, fragrant flowers, followed by an abundance of ornamental seed-pods. For a trellis or a pillar, no annual vine is more chaste, and it will quickly cover an old tree or unsightly building. Pkt., 5c; ¼ oz., 10c.

**JAPANESE HOP** (Variegated).—There is no harder climbing vine than the Japanese hop, and for quick growth, resistance to drought or insects, it has no equal. A new sort, it possesses all the good qualities of its parent, and in addition has beautifully variegated foliage, splashed and streaked with white. Pkt., 10c; 2 pkts., 15c.

## CLEMATIS.

**JACKMANII.**—A very profuse-blooming variety with flowers from 4 to 6 inches in diameter, of an intense violet-purple color, borne in continuous masses on the summer shoots. The very best sort for general planting. Each, 75c, postpaid.

**PANICULATA.**—A great novelty. One of the most desirable, useful, and beautiful of hardy garden vines; a luxuriant grower, profuse bloomer, with fine foliage. Flowers white, of medium size, very pretty and fragrant, produced in the greatest profusion in late summer. Each, 75c, postpaid.

## HONEYSUCKLE.

**YELLOW HONEYSUCKLE** (Hall's Japan).—A strong, vigorous variety, evergreen in the South; pure white flowers changing to yellow. Fragrant, covered with flowers from June to November. Needs winter protection.

## WISTARIA.

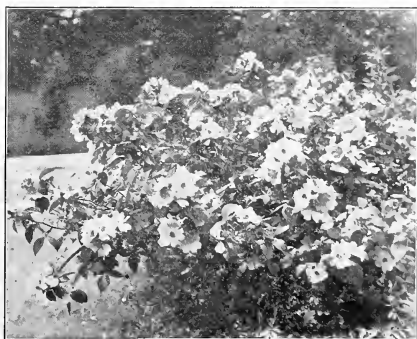
A most beautiful climber of rapid growth, producing long, pendulous clusters of pale blue flowers. When well established, makes an enormous growth. It is very hardy and one of the most superb vines ever introduced.

## TUBEROSES.

**EXCELSIOR DWARF PEARL.**—Irides waxy white; very double and remarkably fragrant. Excellent for pot culture. Dozen, 50c, postpaid.

**TALL DOUBLE.**—Has flower spikes 3½ to 5 feet high. First size bulbs, dozen, 50c, postpaid.

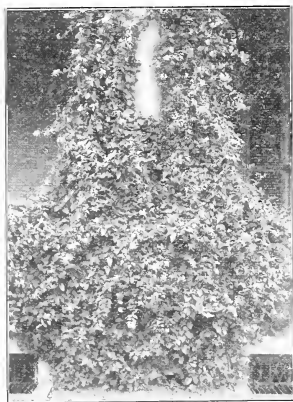
**CINNAMON VINE.**—A well-known climber, brilliant glossy foliage bears an abundance of fragrant flowers. Often attains a height of 20 feet. Dozen, 60c, postpaid.



Prairie Rose.



## FLOWERS—Continued.



Honeysuckle.

**FOXGLOVE.**—Handsome ornamental hardy plants of stately growth. The spikes are often 3 to 5 feet long and thickly stung with scores of thimble-shaped flowers. 3 to 5 feet. Pkt., 10c.

**FOUR-O'CLOCKS** (*Mirabilis, Marvel of Peru*).—Extra fine. Mixed. Pkt., 10c, prepaid.

**GOURDS.**—Ornamental handsome climbers of rapid growth. Pkt., 10c prepaid.

**GERANIUMS.**—Extra fine mixture. Pkt., 10c.

**GYSOPHILA** (*Baby's Breath*).—Dwarf 'b' branching plants of quick growth and great freedom of bloom. The flowers are small, star-like, and borne in feathery sprays, which are highly esteemed for cut flowers, as they lend a most graceful effect when combined in bouquets with Sweet Peas. Pkt., 10c.

**HELIOTROPE.**—Great favorite with flower-lovers for beauty of fragrance. Suited for beds or borders, where they will bloom in summer and may be potted and cut back for winter blooming. Pkt., 10c, postpaid.

**HOLLYHOCK.**—No garden flower is more showy or admired. Double mixed. Pkt., 5c, prepaid.

**IPOMÆA GRANDIFLORA ALBA** (*Moonflower*).—A grand climber when planted in rich soil and well watered; attains a height of 30 to 70 feet; produces immense quantities of fragrant white flowers, measuring from 5 to 7 inches across. Pkt., 10c.

**KOCHIA TRICOPHYLLA** (*Summer Cypress*).—A splendid ornamental annual plant, forming dense oval bushes 2 to 2½ feet high, of small feathery, light green foliage. As summer advances, this changes to a carmine hue and finally to a fiery red. Also called "Burning Bush." Pkt., 10c.

**KUDZU VINE** (*Pueraria Thunbergiana*).—A new climber of great merit. This vine is one of the most rapid climbers there is, growing to 20 feet quickly. Called also "Jack-and-the-Bean-Stalk." Hardy perennial. Pkt., 15c.

**LANTANA HYBRIDA.**—Very desirable plants for house culture, the varieties of which are almost numberless. Very pretty. Mixed. Pkt., 10c.

**LARKSPUR—DWARF GERMAN ROCKET.**—An old and well-known annual. The flowers are borne in compact spikes, and are hardy, showy, and desirable. Mixed colors. Pkt., 10c.

**MARGOLD.**—The Marigolds are old favorite, free-flowering annuals of easy culture. The tall varieties have uniformly large yellow or orange-colored flowers, and are well adapted for large beds or mixed borders. Dwarf French Double Mixed, Tall African Mixed. Pkt., 10c.

**JAPANESE MORNING GLORY.**—Most magnificent flower of exquisite new colors, which are rich and velvety. Mixed. Pkt., 10c.

**FANICULATA.**—Flowers white. A hardy perennial, which will stay in the ground all winter. Pkt., 10c.

## NEW SPENCER SWEET PEAS.

**Mixed Colors.**—This mixture contains seed saved from the largest flowering, most beautiful and varied collection ever sent out. Pkt., 5c; oz., 15c; lb., \$1.75.

**PETUNIA.**—For freedom of bloom, variety of color, ease of culture and effectiveness, these rank with Asters, Phlox, and Verbenas. If only a little care is bestowed upon them, Petunias will produce their handsome, sweet-scented flowers in their delicate and gorgeous colors throughout the whole summer. Pkt., 10c.

**PHLOX DRUMMONDII.**—No garden should be without a bed of this—the most showy of all growing annuals. Pkt., 10c, postpaid.

**PHLOX—STAR OF QUEDLINGBERG** (*Cupidata*).—Star Phlox—Extra choice. Mixed. Pkt., 10c, postpaid.

**HARDY PHLOX** (*Phlox Decussata*).—These rank among the finest herbaceous plants for beds or borders. Mixture of finest sorts. Pkt., 10c, postpaid.

**POPPIES—SHIRLEY.**—Beautiful Poppies, producing large single flowers, ranging in color from pure white, shades of pink to glowing scarlet. Mixed colors. Pkt., 5c, postpaid.

**PORTULACA GRANDIFLORA** (*Rose Moss*).—Single.—This old favorite is brightest in hot, dry weather, when other flowers are drooping; they are of almost every shade and color. Mixed. Pkt., 5c. Double.—Very handsome double anemones. Mixed varieties. Pkt., 10c.

**SALVIA SPLENDENS** (*Scarlet Sage*).—The *Salvia Splendens* is a standard bedding plant that keeps the garden bright with color until late in autumn. This plant lends itself to many uses; it makes a good pot plant, does well in window-boxes, and is useful for cutting to give color. Its best use, however, is as a hedge or border plant, where long broad bands of intense color are desirable. Pkt., 10c.

## MARCO PANSY COLLECTION.

One packet each of the following Four Varieties for 45c: **Madame Perret**, **Masterpiece**, **Bigaots**, **Giant**, **Giant Trimardeau**. The total value of one packet each of the above four splendid varieties is 70c. Every sort is the best of its class and the range of colors is very wide. We heartily recommend this collection.

**BEDDING MIXED.**—Consists of many good sorts. Pkt., 5c.

**MARLOW SEED CO.'S FINEST MIXED.**—A mixture consisting of a grand assortment from the world's leading specialists in Scotland, France, Belgium, Germany, Switzerland, and America. If you like Pansies, you must have the mixture. Pkt., 15c.

## HARDY GARDEN FLOWERS.

If you have ever so little space, you will want hardy flowers. With the material offered in this list, the most beautiful and interesting gardens can be made; gardens that increase in charm and beauty year after year; gardens that change their aspect with every change in the season. You can select hardy flowers for every possible location in either sun or shade, and we shall be glad to suggest varieties for any particular location which you may have in mind. Mass them in front of the shrubbery or along the boundaries of the lawn, or border the walks or drives.

**HOLLYHOCK** (*Althea Rosea*).—The most majestic of all perennials, with magnificent spikes of large, round flowers in all shades from white and yellow to deep red. Each, 25c.

**PLUME POPPY** (*Bocconia Cordata*).—A fine, stately plant, growing to large size, with large, handsomely lobed foliage and showy clusters of feathery flowers, producing the effect of brilliant plumes. Each, 25c.

**CHRYSANTHEMUM, POMPON.**—The old standard garden Chrysanthemums from which the large fancy flowers were evolved. Among the latest flowers in the garden. Each, 25c.

**AMERICAN COLUMBINE** (*Aquilegia Canadensis*).—An interesting plant with daintily lobed foliage and odd spurred flowers of yellow and red, borne on long stems. Each, 25c.

**GOLDEN GLOW** (*Rudbeckia Laciniata*).—The tallest of all perennials, bearing great masses of double, brilliant golden yellow flowers on long stems. Increases very rapidly. Each, 25c.

**HARDY OR GARDEN PHLOX** (*Phlox paniculata*).—One of the favorites of long ago in which great improvement has been made. From the old-time clusters of purplish pink flowers has been evolved a most magnificent family of hardy perennials, bearing enormous trusses of magnificent flowers in every conceivable shade of color from a crimson so deep that it is almost black to pure, glowing white. Each, 15c.

## ORNAMENTAL BEANS.

**SCARLET RUNNER BEAN.**—Ornamental and useful. The vine is graceful; flowers are of a brilliant scarlet, and the beans are of excellent quality either when shelled or in dry state. Lb., 30c.

**GIANT ZANZIBAR CASTOR BEAN.**—The enormous leaves, beautifully lobed, 2½ to 4 feet across. Each plant makes a pyramid of foliage, thickly set from top to bottom. Pkt., 5c; oz., 15c; 2 ozs., 25c.



Syringa, or Mock Orange.



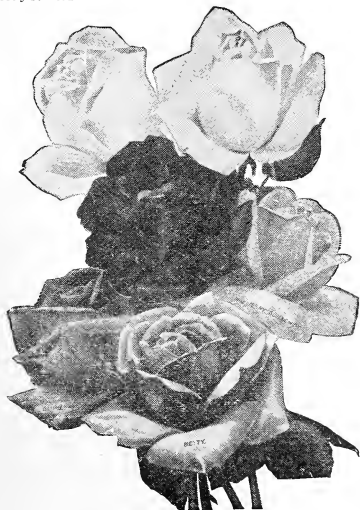
## FLOWERS—Continued.



Climbing American Beauty Rose.  
**RAMBLER ROSES.**

**CRIMSON RAMBLER.**—Best all-around, hardy garden Rose, on account of its brilliant color, profusion of bloom and length of time the flowers last. Used as a climber, or can be grown in large bush form. It blooms in large clusters of 50 to 100 flowers in a cluster, covering the foliage its entire length with a solid mass of the most beautiful perfectly shaped miniature crimson blossoms. Blooms last of June and remains in flower longer than any other hardy outdoor Rose.

**DOROTHY PERKINS.**—Splendid, new shell-pink climbing Rose. Of the same strong habit of growth as the Crimson Rambler, and the flowers are borne in clusters of thirty and forty. The flowers are large. Very double and sweetly scented.

**EVERBLOOMING ROSES.**

All 2-year-old plants, price, postpaid, each, 75c; 3 for \$2.00.

**AMERICAN BEAUTY ROSE.**

Who has not heard of the American Beauty, the Rose famed in story, poetry, and song? The cut flowers are frequently sold during the winter at \$10.00 to \$25.00 per dozen. What flower-lover has not hoped some day to have a "garden of roses" with American Beauties galore?

**CLIMBING AMERICAN BEAUTY** (Hoopes Bros. & Thomas, 1911) — A seedling from American Beauty with Wichuriana and Tea blood in its veins. Good foliage, and better blooming qualities. Blooms 2 to 4 inches across; has proved perfectly hardy and stands heat and drought as well as any Rose in our collection. We feel sure this Rose has a great future.

**ANTOINE RIVOIRE.** — A handsome Rose with large, full, Camellia-shaped flowers. Color, rosy flesh on a yellow ground, shaded with a border of carmine.

**ETOILE DE LYON.** — This is considered one of the finest yellow bedding Roses for outside planting.

**ETOILE DE FRANCE (Hybrid Tea).** — The gold medal Rose of France, and claimed by the raiser, J. Pernet Ducher, to be the finest Rose he has ever sent out. A very strong, vigorous grower, with handsome green-bronzy foliage, and exceedingly free flowering. The flowers are very large and borne on good, long, stiff stems; color, a lovely shade of clear red crimson velvet; very fragrant and keeps well.

**GENERAL JACQUEMINOT.** — Bright red, fragrant. This is too well known to need description.

**GRUSS AN TEPLITZ.** — When first opened, it is a rich, dark crimson quickly changing to a velvety fiery red.

**AUGUSTA VICTORIA.** — This beautiful Rose is a continuous bloomer; color, a pure snow white.

**LA FRANCE.** — It is of superb form, and double as a Rose can be; silvery rose, shaded with pink.

**MAMAN COCHET.** — One of the best pink Roses. The color is deep rosy pink.

**PRINCESS ADELAIDE** (Laffay, 1845) — Deep blush pink with buds that are thoroughly mossed.

**PRES. WM. R. SMITH.** — The flowers are large, full and double and most exquisitely formed. The petals softly curled, colored cream with fresh tint tips, buff-yellow base, and the center is a heart of pink. Flowers are borne on long stems.



## NURSERY STOCK.

### SPECIAL DIRECT PRICES.

**Terms.**—Cash with order.

**No Packing Charges.**—No charge for boxing and packing.

**Freight and Express.**—Special low freight and express rates apply to all shipments of nursery stock. Prices quoted in this book are f. o. b. Wichita, customer paying transportation charges.

**Our Guarantee.**—Your order will be accepted and filed with the understanding that the stock must **satisfy you**. That's plain and means just what it says. It makes you the judge.



**Yellow Transparent.**

#### APPLE.

**Varieties:** Carolina Red June, Duchess of Oldenburg, Early Harvest, Sweet June, Yellow Transparent, Maiden Blush, Rambo.

**Winter Varieties:** Arkansas Black, Ben Davis, Gano, Grimes' Golden, Jonathan, Mammoth Black Twig, Missouri Pippin, Ralls (Jeniton), Stayman Winesap, York Imperial, Winesap.

2 to 3 feet, branched.....	Each.	10
3 to 4 feet, branched.....	\$0.50	\$4.50
2-year, 4 to 5 feet.....	.60	5.50
2-year, 4 to 5 feet.....	.75	7.00

Delicious and White Banana.

2-year, 3 to 4 feet.....	Each.	10
2-year, 4 to 5 feet.....	\$0.60	\$5.50
2-year, 4 to 5 feet.....	.75	7.00

#### APRICOT.

Early Golden, Royal, and Moorpark.

1-year, 2 to 3 feet.....	Each.	10
2-year, 3 to 4 feet.....	\$0.50	\$4.50
2-year, 3 to 4 feet.....	.60	5.50

#### CHERRY.

Black Tartarian, Dyehouse, English Morello, Large Montmorency, and Early Richmond.

1-year, 2 to 3 feet.....	Each.	10
2-year, 3 to 4 feet.....	\$0.60	\$5.50
2-year, 3 to 4 feet.....	.75	7.00
2-year, 4 to 5 feet.....	1.00	9.00

#### CRABAPPLE.

Florence, Transcendent, and Whitney No. 20.

2-year, 3 to 4 feet.....	Each.	10
2-year, 4 to 5 feet.....	\$0.60	\$5.50
2-year, 4 to 5 feet.....	.75	7.00

#### PEACH.

Crawford Early, Crawford Late, Champion, Crosby, Elberta, Heath Cling, Mayflower, Stump the World, Triumph.

2 to 3 feet.....	Each.	10
3 to 4 feet.....	\$0.50	\$4.50
4 to 6 feet.....	.60	5.50
4 to 6 feet.....	.75	7.00



**Apr Beauty (Dixie Queen).**  
**The earliest good yellow Peach.**

#### PEAR.

Bartlett, Clapp's Favorite, Angouleme (Duchess), Garber, Kieffer, Seckel.

#### Standard.

2-year, 3 to 4 feet.....	Each.	10
2-year, 3 to 4 feet.....	\$0.50	\$4.50
2-year, 4 to 5 feet.....	.60	5.00
2-year, 5 to 6 feet.....	.75	7.00

#### Dwarf.

2-year, 2 to 3 feet.....	\$0.50	\$4.50
2-year, 3 to 4 feet.....	.60	5.50
2-year, 4 to 5 feet.....	.75	7.00

#### PLUM.

Red June, Abundance, Burbank, Satsuma (Blood), Wickson, German Prune, Lombard, Shropshire, Damson, and Gold.

Each. 10

1-year, 2 to 3 feet.....	Ask for prices.
2-year, 3 to 4 feet.....	
2-year, 4 to 5 feet.....	

Opata, Sapa, Hanska.

2 to 3 feet.....	Ask for prices.
3 to 4 feet.....	

#### QUINCE.

Orange, Rea's Mammoth, Van Deman.

2-year, 2 to 3 feet.....	Each.	10
2-year, 3 to 4 feet.....	\$0.60	\$5.50
2-year, 3 to 4 feet.....	.75	7.00
2-year, 4 feet and up.....	1.00	9.00

#### GOOSEBERRIES.

Pearl.....	Prices on application.
Downing.....	
Houghton.....	
Oregon Champion.....	

#### CURRENTS.

London Market.....	Prices on application.
Perfection.....	
Red Cross.....	
White Grape.....	

# NURSERY STOCK.

**SPECIAL DIRECT PRICES.**



**Everbearing Strawberry.**  
**STRAWBERRIES.**

**NOTE.**—Strawberry Plants are packed twenty-five in a bunch. We do not break bunches. Plants should be ordered sent by express or parcel post at your expense.

The Strawberry plant has a fleshy crown just at the surface of the ground. The roots extend from the lower end of the crown and the leaves from the upper end. Runners also grow out with the leaf stems from the crown, and when they are a few inches long they strike root, forming new plants. In most systems of strawberry culture (excepting the stool method) the mother plants are set out, and the new plants formed by runners are depended upon to bear the fruit.

The hill or stool system is best. Set the plants from 1 to 1½ feet apart in the rows, the rows to be 3 to 4 feet wide. For the home garden, set in beds 4 to 5 feet wide, with the plants 1 foot apart each way. Pinch off the first lot of bloom and cut off the runners as fast as they form. The plants will form a crown or stool, and by preventing the formation of new runner plants the "stool" can be thoroughly cultivated throughout the season. The Everbearers will ripen fruit continuously throughout the summer, if they have sufficient moisture and fertility. To get the maximum returns during the summer and fall, they should be planted on fertile ground and cultivated and also watered during a drouth.

**Progressive Everbearing Strawberry.**

One of the best for home use.

Assorted Varieties.....	25	100
	\$0.65	\$2.00
<b>Everbearing.</b>	25	100
Progressive and Superb.....	\$1.25	\$3.00



**Oregon Champion.**  
**The most productive Gooseberry.**

## BLACKBERRIES.

The Blackberry has a rich spicy flavor and is one of the best fruits for canning, preserving, and cordials. It is not surpassed for eating fresh when fully ripe. However, it takes on color, and is often sold on the market before it is ripe, so that many people have never had the opportunity of eating ripe Blackberries.

Early Harvest.....	10	100	1000
Rathban.....	} Prices on application.		
Wilson Large.....			
Snyder.....			

## RASPBERRIES.

Red and black Raspberries have a lusciousness that requires no cooking and seasoning to make them tempting. They will not stand rough handling or long-distance shipment. They require reasonably fertile soil, and should have care and attention for best results. They bear the second year.

### Red Raspberries.

Cuthbert.....	10	100
Cardinal.....	} Prices on application.	

### Black Raspberries.

Cumberland.....	10	100
Gregg.....	} Prices on application.	
Kansas.....		

## DEWBERRIES.

The Dewberry is very closely related to the Blackberry; however, it will thrive on poor or sandy soils where Blackberry or Raspberry cannot be grown. It is less affected by drouth than either Blackberry or Raspberry.

Lucretia.....	10	100
	} Prices on application.	



## GRAPES—No. 1 Vines.

The Grape is a winning fruit. The vine adapts itself to nearly all soils. Almost anyone can grow a bushel of grapes anywhere. You cannot stop Concord, growing wild over fences and trees, from producing a good crop. Vines trained over arbors for shade will yield heavily and they can also be trained over buildings to keep out the heat. While the bunches of fruit will not be perfect, they will be of good quality and very satisfying.

The earliest varieties of Grape start ripening about the last of July in the South and the first of September in the North. The season extends over a period of four weeks in the South and about six weeks in the North.

Agawam.....	Each.	10	100
Campbell's Early.....	} Prices on application.		
Catawba.....			
Brighton.....			
Concord.....			
Delaware.....			
Cynthiana.....			
Moore's Early.....			
Moore's Diamond.....			
Niagara.....			
Packlington.....			
Woden.....			
McPike.....			

## POULTRY SUPPLIES.

## SAFETY HATCH INCUBATOR—SAFETY BROODER.

Safety Hatch Incubator is the most sanitary Incubator on the market. Easy to clean—study the picture—as easy to clean as a dinner plate. Few parts make Safety Hatch strong.

Louisiana red cypress is used in construction, which is the best wood to keep in the heat and bar out the cold. Few parts make Safety Hatch strong—easy to operate. Little attention. Good results. And the price is small.

Back of our word is a guarantee—your money back if not as represented. All who own Safety Hatch Incubators are satisfied. Satisfaction goes with every purchase.

The Safety Hatch Incubator is best for the beginner. It is simple to operate. It is built to bring the greatest results from the number of fertile eggs. So it is best for the professional poultry-raiser.

Safety Brooders, made for outdoor use. Each chicken receives the same degree of warmth. The same care and finish that goes into the Safety Hatch Incubators.

The Safety Brooder has the same broad guarantee as the Safety Hatch Incubator. Send for catalog.

## SEFTON LIVE CHICK BOX.

Made from best grade of corrugated paper. For shipment it is folded flat, but can be easily set up and made ready for use.

The use of this Box has made it possible to make long-distance shipments of live chicks with safety. The demand for this package is growing rapidly.

Chicks.....	25	50	100
Weight per dozen, pounds.....	6¼	14	22
Size, inches.....	12x6x5	12x12x5	24x12x5
Per Dozen.....	\$2.70	3.50	5.50

An extra charge of 25c for orders of less than dozen of a size.

## ANDERSON EGG BOX.

## For Fancy Eggs for Hatching.

The Anderson Egg Box is made of corrugated paper and has double-faced corrugated paper partitions like the Eyrie, to protect each individual egg. The ability of the Anderson Egg Box to fold flat enables us to ship them in a knocked-down condition, third-class freight. By sealing the box with gummed strips, which we furnish, pilfering and substitution of common eggs for fancy eggs while in transit is eliminated.

	Shipping Weight per Dozen	Per Dozen.
1 Setting.....	10 lbs.....	No. 3, \$2.50
2 Settings.....	13 lbs.....	No. 4, 3.75
50-Egg Size.....	24 lbs.....	No. 5, 5.15
100-Egg Size.....	45 lbs.....	No. 6, 8.25

An extra charge of 25c for orders of less than one dozen of a size.

## MOE'S GRIT AND SHELL BOX.

Has three compartments for grit, shell, and charcoal; galvanized iron. Can be used as feed hopper for small chicks.

3 compartment.....	\$1.10
4 compartment.....	1.40

## CHAMPION LEG BAND.

Made of aluminum. Dozen, 20c; 100, 90c.

## RELIABLE OIL BURNER BROODERS.

Economize by raising all chicks in the reliable blue flame wickless oil-heated Colony Hover. They are made in three sizes. The 30-inch Hover will take care of 350 chicks or less, the 12-inch Hover will take care of 500 chicks or less, and the 58-inch Hover will take care of 1,000 chicks or less. You can raise a few of these or as many up to the given capacity. A few of the special points of the oil-heated Hover are as follows:

No wick to trim, steady blue flame, comfortable and easy to operate, abundance of heat, no oil fumes, visible oil feed, convenient and safe, no coal, no smoke or gas, the flow of oil is regulated automatically, economy of operation, average consumption 17 gallons per thirty days. Our automatic regulator will take care of all surplus heat by regulating the flow of oil, thus saving fuel. There is no dirt, no ashes to remove, no noise pouring coal in stove to scare or disturb the chicks.

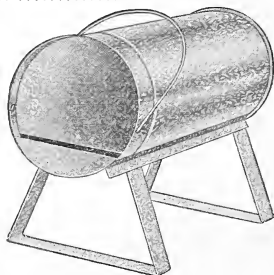
A large number of State Agricultural Experimental Stations are using these Hovers and heartily recommend them. They are properly ventilated; our regulator is attached so the oil will drop as needed. After the regulator attached to valve is once properly adjusted according to directions, you need not pay any more attention, only to feed and water the chicks, for it is impossible to chill them.

	Prices.		
Nos.....	0	1	2
Size, inches.....	30	42	52
Weight, pounds.....	40	45	55
Each.....	\$16.50	\$18.50	\$22.00

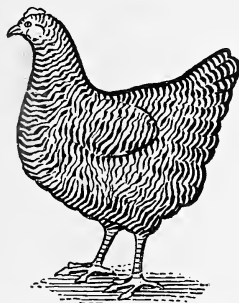
## KNOCKED-DOWN SELF-FEEDING DRINKING FOUNTAINS.

The most sanitary Fountain on the market. Easily filled; stands high on legs, which are removable—makes them easy to ship; has bail like a bucket to carry.

1-gallon size.....	Each, \$0.85
2-gallon size.....	Each, 1.25



## POULTRY SUPPLIES—Continued.



## MARCO BRAND HEN FOOD

A very superior mixed Food, which meets all the requirements of maturing chicks and laying hens. The feed is composed of only sound, sweet grain, as we never, under any condition, allow any damaged grain to get into this Food. The mixture is made carefully and scientifically. We believe this Food to be the cleanest and best-balanced ration on the market to-day. No shell, no grit. Licensed and guaranteed. No neidfe existence equals it to make hens lay.

## CHICK FEED.

This contains all that is necessary for chickens until they are four or five months old, except water (skimmed sweet milk is best) to drink, and clean fresh grass or green feed. With proper attention to their surroundings, this Food will raise every chick. Never feed more than they will eat up clean and make them hunt or scratch for most of it. Licensed and guaranteed.

## POULTRY GRITS AND FEEDS.

We carry in stock a very complete line, and will appreciate your orders.

**Charcoal.**—50-lb. sacks, each, \$3.50.

**Crushed Oyster Shells.**—100-lb. sacks, each, \$1.75

**Mica Crystal Grit.**—100-lb. sacks, each, \$2.00.

**Fine Ground Bone.**—100-lb. sacks, each, \$6.00.

**Coarse Ground Bone.**—100-lb. sacks, each, \$6.00.

**Hemp Seed.**—Lb., 25c.

**Canary Seed.**—Lb., 35c.

**Rape Seed.**—Lb., 25c.

**Sunflower Seed.**—Lb., 30c.

## GROUND BEEF SCRAPS.

Beef Scraps are rich in materials which make bone, muscle, and lean meat. They insure health, thrift, and vigor, and satisfy the natural craving of the bird's system for flesh food in some form. No other meat food is so highly concentrated, and no substitute is so convenient for handling and storage. Contains 55 per cent protein. Will keep in any climate under all conditions. We guarantee our Beef Scraps to be pure and free from any adulteration. 100 pound sacks, each \$7.75.

## SANITARY DRINKING FOUNTAIN.

This Fountain is made of best galvanized iron. Will not rust and will last years. Quick and easy to fill and convenient to carry. Holds 1 gallon. Each, \$1.50.



## CRUSHED SHELL FOR POULTRY.

This is not clam shell. A great many firms are offering oyster shells at a cheap price and shipping clam shells, which are very inferior as a poultry food. Advantages gained by use of it: It acts as a grit and prevents cholera and other diseases. It makes the hens lay more. It prevents soft shells. It contains many essential compounds of the egg. It makes eggs larger and heavier; is sharp, and cleaned contains 95 per cent of carbonate of lime, as shown by the chemical analysis. Send us a trial order. You can not afford to be without it. 10 lbs., 30c; 50 lbs., \$1.00; 100 lbs., \$1.75.

## CHARCOAL.

To keep fowls in a healthy state, a regulator of some kind must be fed. Nothing takes the place of charcoal in this respect, as it purifies the blood, aids digestion, and tones up the whole system. No matter whether your fowls are young or old, give them an occasional feed of charcoal. Two sizes, fine and coarse. 6 lbs., 60c; 50 lbs., \$3.50; 100 lbs., \$6.50.

## BLOOD MEAL.

Pure Blood Meal, or dried blood, is a great protein carrier, and as an egg-producer it stands high on the list. The grade we offer is especially prepared by a process which eliminates disease germs and other undesirable elements. 1 lb., 15c; 25 lbs., \$2.00; 100 lbs., \$6.00.

## CRUSHED BONE.

Fine or coarse. It is made from fresh bones from which the moisture has been taken, leaving nothing but the phosphates, lime, and protein. Bone is especially valuable as a bone-builder. 10 lbs., \$1.00; 25 lbs., \$2.00; 100 lbs., \$6.00.

## STOCK FOODS, TONICS, Etc.

## DR. HESS STOCK TONIC.

Give It Daily to Horses, Cows, Steer, Hogs and Sheep.

Sleek horses, healthy cows, beefier steers, fatter hogs and sheep, all these mean more money for you. They can be had at no extra trouble, too—just like finding that much money.

The original and pioneer stock regulator of America. The first to be sold on a guarantee to do the work or money refunded. Every package and pail still sold on that plan.

25-pound pail, the size you ought to be using, \$3.00. Also in 50-pound and 100-pound sacks and in small packages.

## DR. HESS INSTANT LOUSE-KILLER.

Kills lice on stock and poultry.

## DR. HESS DIP AND DISINFECTANT.

A stock dip, a reliable disinfectant.

## OTHER DR. HESS PREPARATIONS.

Dr. Hess Healing Powder.

Dr. Hess Distemper Remedy.

Dr. Hess Fly-Chaser.

Dr. Hess Heave Powder.

Dr. Hess Colic Remedy.

Dr. Hess Koup Remedy.

## BLATCHFORD'S CALF MEAL.

## The Complete Milk-Equal.

This is in reality a substitute for milk—and should not be considered as ordinary "feed" or "meal."



"Good to the last drop"

## POULTRY REMEDIES AND FOODS.

**CONKEY'S BUTTERMILK STARTING FOOD.**

In **Conkey's Buttermilk Starting Food** you get pure, rich buttermilk in dry powdered form, because Conkey has found how to remove the great bulk of the water from ordinary buttermilk and still retain the valuable lactic acid with all its digestive and food values. In this dry powdered form, the buttermilk keeps in good condition and is always ready for use whenever a hatch comes off. It is mixed with a combination of clean, wholesome grains that form a balanced ration just right for little chicks. This makes it a complete starting food for the first three weeks, the most critical period. If fed to all your chicks, will give you strong, active, vigorous, healthy chicks that will outstrip their fellows from the start. They will grow into heavy layers, virile breeders, full-bodied market birds. Lb., 10c; 100 lbs., \$8.00.

**CONKEY'S CHOLERA REMEDY.**

A positive cure for fowl trouble, indigestion, diarrhoea, dysentery, cholera, etc. Guaranteed cure. 30c, 60c, not postpaid.

**CONKEY'S WHITE DIARRHOEA REMEDY.**

A sure remedy that can be relied on; it will save the little chicks. 60c, not postpaid.

**CONKEY'S FLY-KNOCKER.**

Prevents flies from annoying stock. It is perfectly harmless, has a pleasant, pungent aroma and actually keeps flies and mosquitoes out of range of its odor. It kills every insect it hits and keeps others out of buzzing distance. It will add flesh to stock in fly-time, and its use in summer will prevent lice and in winter grub. Quart, 60c; half-gallon, 90c; gallon, \$1.50, not postpaid.

**CONKEY'S ROUP REMEDY.**

It should be on hand for occasional use as a preventive and tonic, as well as be ready in case of real need. Positively one remedy you must not neglect to get is Conkey's Roup Remedy. One package may save you the loss of your whole flock. 60c, postage 6c; \$1.20, postage 12c.

**CONKEY'S LICE POWDER**

Does more than scare or stun the lice—it really kills them dead. At the same time it does not hurt the fowl in any way or taint the eggs. Fine for sitting hens and in nests. 5-ounce package, 15c; postage 5c; 15-ounce package, 30c; postage 17c; 48-ounce package, 60c.

**CONKEY'S LICE LIQUID**

Rids the poultry-house of mites. Spray the house thoroughly with one part Conkey's Lice Liquid and 25 to 50 parts water. Then take the Lice Liquid full strength and paint it on roosts and in cracks. Repeat in ten days, when the mites hatch out. This kills the mites and disinfects the poultry-house. Quart, 50c; 2 quarts, 75c; 1 gallon, \$1.25; express extra.

**CONKEY'S HEAD LICE OINTMENT**

Saves little chicks. Two or three big head lice can kill a little chick in a few days. You can prevent this loss with Conkey's Head Lice Ointment. 15c, postage 2c; 30c, postage 4c.

**CONKEY'S LAYING TONIC.**

This actually makes hens lay without harming them. It is not a food in itself, and you escape paying for bran and middlings, which make most egg-producers so bulky. 1½ pounds, 30c; 3½ pounds, 60c; 7 pounds, \$1.00; 25-pound pail, \$3.00; express extra.

**Conkey's Bronchitis Remedy**, 60c, postage 8c.

**Conkey's Gape Remedy**, 60c, postage 18c.

**Conkey's Chicken Pox Remedy**, 60c, postage 10c.

**Conkey's Limber Neck Remedy**, 60c, postage 12c.

**Conkey's Poultry Tonic**, 30c, postage 9c.

**Conkey's Scaly Leg Remedy**, 60c, postage 10c.

**Conkey's Rheumatic Remedy**, 60c, postage 9c.

**Conkey's Healing Salve**, 30c, postage 3c.

**Conkey's Poultry Laxative**, 30c, postage 6c.

**Conkey's Flea Salve** (for Southern Sticketing), 30c, postage, 6c.

**Conkey's Sulphur Candles**, 12c each, three for 30c, \$1.00 per dozen; 5c each for postage or express extra.

**PRATT'S LICE-KILLER**

Quickly and thoroughly kills lice on poultry, and keeps nests, litter, and dust baths clean.

Kills lice on horses, cattle, hogs, and cats; destroys sheep tick; rids plants of insects and bugs. A valuable deodorizer and disinfectant, and should be used around houses, poultry-houses, stables, and barns. Destroys moths and bugs.

Non-poisonous and non-explosive. While sure death to lice, it is not a bit irritating to the skin or lungs of poultry. 25c and 50c sifting-top boxes.

**PRATT'S WHITE DIARRHOEA REMEDY.**

The time to save baby chicks from white diarrhoea, the most deadly of all chick diseases, is before they get it. Begin with the first drink of water as soon as they are hatched and use Pratt's White Diarrhoea Remedy.

Remember the germs are in the chicks when hatched, being transmitted from the egg. Keep the germs from becoming active by using this Remedy. 30c and 60c.

**PRATT'S POULTRY REGULATOR**

Does hens lay. It regulates the blood, bowels, and digestive organs of all fowls. As an egg-producer it stands unrivaled, and when used regularly hens lay throughout the year.

It will prevent most of the common poultry diseases. Such diseases as chicken cholera, gapes, roup, rheumatism, worms, and unnatural habits as egg-eating are unknown when it is given regularly. Composed of the highest grade of absolutely pure imported roots, herbs, and health-giving herbs, it forms a perfect regulator and tonic, suited exactly to chicks, pullets, and grown birds. It will also greatly improve and make it easier to raise turkeys, geese, ducks, pigeons, and guineas, and other fowls.

Just think of keeping your flocks healthy and laying at a cost of a cent a day for thirty birds. 25-lb. pail, the favorite size for many poultrymen, \$3.00; 100-lb. sacks, \$10.00; also in 30c, 60c, and \$1.20 packages.

**PRATT'S ROUP REMEDY.**

(Tablets or Powder.)

Its healing properties are quickly taken into the system, purifying the blood and killing the roup germs. It not only cures, but tones up and restores the birds to vigorous health. It is the one remedy for genuine roup, as well as colds and similar diseases. 30c, 60c, and \$1.25.

**PRATT'S SORE HEAD-CHICKEN POX REMEDY**

Will clear up the ugly-looking chicken pox sores, smooth out the plumage, restore to health and vigor, and build up the birds in flesh. 30c and 60c.

**PRATT'S SCALY LEG REMEDY**

Will effect a complete cure in a few days. It kills the parasites which cause the trouble, and promotes a new, healthy growth of skin to take the place of the diseased parts. 30c and 60c.

**PRATT'S GAPE REMEDY**

Will effect a positive cure in chicks already attacked by gapes. If used in the drinking water from the very first drink, it will protect the birds. This remedy has our unqualified money-back guarantee. 30c and 60c.

**PRATT'S HEAD LICE OINTMENT**

Kills head lice instantly. It soothes, heals, is safe to use on all parasitic diseases. Mailed postpaid on receipt of price, if not at your dealer's. 15c and 30c.

**PRATT'S CONDITION TABLETS.**

For putting on flesh, preventing colds and similar troubles, absolutely guaranteed or money back. 30c and 60c.

**PRATT'S CHOLERA REMEDY**

Cures cholera when it comes—that is guaranteed. Used regularly, will prevent its coming. A sure remedy for sour crop, indigestion, and bowel trouble—diseases that are the forerunners of cholera. As cholera is very contagious, you cannot afford to experiment. Mailed on receipt of price, 30c and 60c.

**DR. HESS POULTRY PAN-ACEA.**

Helps to keep poultry healthy and to make hens lay.

**LEE'S GERMOZONE.**

Nothing better for roup, cholera, bowel complaint. Per bottle, 40c, 75c, \$1.50.

**CHAD'S LICE-KILLER.**

We are general agents for this, the best of all Lice-killers. Quart, \$1.00.

# INSECTICIDES, FUNGICIDES, DISINFECTANTS.

We cannot send liquids or poisons through the mails, so that all Insecticides go by express or freight, not prepaid, unless quoted by parcel post.

## PARIS GREEN.

For liquid spraying. Use 1 pound of Paris Green to 100 or 200 gallons of water, according to strength desired. It will be found generally strong enough if  $\frac{1}{2}$  pound is stirred in a barrel (50 gallons) of water, and allowed to stand twenty-four hours before using. Care must be taken in using all poisonous liquids that animals are not allowed to get at them. In powder form, use 1 pound of Paris Green and 20 to 50 pounds of flour; mix thoroughly, apply evenly, preferably when dew is on plants. Prices on application.

## LIME-SULPHUR SOLUTION.

The best remedy for San Jose scale and other scale insects on trees and shrubs. Use 1 gallon to 20 gallons of water during December and January, but earlier or later dilute 1 gallon to 40 gallons of water. Prices on application.

## CALCIUM-ARSENATE.

(Dry or Paste.)

It can be applied, pure or reduced, with any of the dusting machines or guns. From 1 to 30 pounds per acre should be used. In water, for most purposes, use from 1 to  $1\frac{1}{2}$  pounds of the dry or 30 to 50 pounds of the paste to 50 gallons.

## NOX-I-CIDE.

A non-poisonous, soluble disinfectant and germ-destroyer. By mixing with water, 1 gallon will make 10 gallons of disinfectant. Pint, 40c; quart, 70c; half gallon, \$1.00; gallon, \$1.75; express extra.

## DEVORE BORDEAUX MIXTURE.

Dry Powdered Form.

### Fungicide.

To Control Scale and Blight. For All Fungous Diseases. The best Fungicide for curing or preventing blight, rot, mildew, blight, leaf curl, scab or other fungous diseases on fruit and plants, if used dry.

### DIRECTIONS.

For potatoes, dust without reduction, 4 to 5 pounds per acre (according to size of vines).

For fruit trees, dust after reducing 1 pound of Dry Bordeaux with 20 pounds of lime dust.

For spray, to make the equivalent of 4-4-50 mixture, use 8 pounds of Dry Bordeaux Mixture to 50 gallons of water. For 5-5-50 mixture, use 10 pounds to 50 gallons of water.

1-lb. cartons.....	55c per lb.
5-lb. cartons.....	45c per lb.
10-lb. boxes.....	35c per lb.
25-lb. drums.....	29c per lb.
50-lb. drums.....	26c per lb.
100-lb. drums.....	24c per lb.
300-lb. barrels.....	23c per lb.

## ARSENATE OF LEAD.

Our stock of this is strictly fresh, from one of the best factories in the country, and will be found the best spraying preparation in the entire list for the destruction of insect pests. Use 3 pounds to 50 gallons of water, or, if preferred, use 50 gallons of Bordeaux mixture instead of water for dilution. Prices on application.

## DEVORE "SURE NOXEM."

Dry Powdered Form. Insecticide to Most Leaf-eating Insects. One of the best vegetable Insecticides in use. Specially recommended for destroying worms and insects.

For cabbage, cauliflower, tomato plants, cucumber vines, melon vines, currant bushes, gooseberry bushes, vegetables, and flowers of all kinds attacked by leaf-eating insects.

1-lb. sifter-top cartons.....	25c per lb.
5-lb. packages.....	11c per lb.
10-lb. boxes.....	10c per lb.
25-lb. drums.....	9c per lb.
50-lb. drums.....	8½c per lb.
100-lb. drums.....	8c per lb.
300-lb. barrels.....	7½c per lb.

## PRATT'S DIP AND DISINFECTANT

Stands at the top as the one successful way to insure healthy animals and clean quarters.

Scarcely less important than proper feeding is the necessity for having clean quarters for live stock and poultry. Unless stables and poultry-houses are kept thoroughly cleaned and disinfected, a host of troubles is sure to follow. Blood-sucking ticks and mites and skin diseases, such as eczema and ringworm, are typical enemies of stock, causing them in a short time to be in run-down condition and an easy prey to disease.

Cures horses of mange, lice, eczema, ringworm, thrush, and is a perfect remedy for galls, sores, and similar wounds.

Hog cholera is unknown where Pratt's Dip and Disinfectant is used. Rids hogs of lice and ticks and cures all skin troubles.

Sheep ticks, the great foe of sheep, are destroyed, and other sheep diseases, such as scab and foot-rot, are cured. Use it freely at lambing-time.

1 gallon, \$1.25;  $\frac{1}{2}$  gallon, 75c; 1 quart, 45c.

## BROWN AND GRAY PRUNING PAINT.

Ready Mixed.

This is an Insecticide Paint, to be used on all trees, shrubs, and vines after pruning. It not only helps to heal the wound, but keeps out all moisture, prevents "bleeding," and kills insects.

Barrels, about 50 gallons to barrel; 5-gallon cans; 1-gallon cans, 6 to case;  $\frac{1}{2}$ -gallon cans, 24 to case.

Write for book of directions.

## BLACK LEAF.

A solution of nicotine sulphate especially adapted for outdoor spraying against aphids and soft-bodied sucking insects. Follow instructions carefully. A small bottle makes 6 gallons; each, 25c.  $\frac{1}{2}$  lb. makes 40 to 100 gallons; each, 75c. 2-lb. cans, \$2.50; 10-lb. cans, \$10.25.

## THE STANDARD SPRAY PUMP.

The Standard Spray Pump is in reality simply a very carefully designed and accurately made "squirt gun" provided with a proper outfit of nozzles.

Its plan of operation is quite different from other types of spraying apparatus, since the hose is used on the suction end instead of the discharge end. This makes it possible to use the pump with a bucket, barrel tank, or knapsack, depending upon the number of trees or the kind of spraying to be done.

For bucket use a  $3\frac{1}{2}$ -foot length of hose is supplied. To use it with barrel or tank for a large orchard, a longer hose up to 25 or 30 feet is desirable.

The Standard is provided with a set of three nozzles.

Price of complete outfit, \$10.00, including Standard Spray Pump, Nozzle, 5-gallon Galvanized Knapsack, and Brass Extension Rod for spraying potatoes, tomatoes, or other trees. We guarantee satisfaction or money returned.



The Lightning Barrel Spray Pump has great capacity and will throw a solid, continuous stream of any size spray desired. The air is compressed into the air chamber, thereby giving an unbroken stream; with one stroke of the Pump handle, the pressure is retained so that the work of the Pump handle is very slow, and yet gives a great force of water, which is accomplished by the compressed air chamber, making it the most rapid Spray Pump made. The agitator thoroughly stirs the liquid and prevents it from settling. It is provided with a brass strainer in the bottom of the suction barrel.

The suction barrel is made of heavy brass, ground together so that all parts fit absolutely air-tight, and will not corrode or rust out. This Pump is easily and quickly adjusted to any barrel provided with means of bolting to the staves of the barrel at upper end. Complete with 15 feet of hose, base, and agitator, \$17.50.

## HIGH-GRADE FERTILIZER.

**Good profits can only be obtained from good crops. Good crops can only be produced from good soil. There is only one way to keep soil good, that is, to use a Fertilizer in some way or other;** must either use stable manure commercial fertilizer, or plow under a green manure, such as clover, cow peas, soy beans, vetches, etc. Stable manure often contains many weed seeds, and the ground must be idle for a crop of clover or a green fertilizer for at least one season; therefore we recommend Commercial Fertilizers, such as Pulverized Sheep Manure, Bone Dust, Nitrate of Soda, where quick results are wanted.

**Good Fertilizer will prepare the soil so that it can be depended upon to produce good crops.** To those, if any there be, that doubt the efficacy of fertilizing the land, we say, try an acre or two as an experiment. The result will speak for itself. Our prices include sacks and cartage to depot in Kansas City, Mo., 1,000 pounds of one kind at ten rate, except where 500-pound or 1,000-pound price is quoted. We cannot break bags except as noted.

**Practical Fertilization.**—To enable the farmer to understand more thoroughly the science of fertilization, we here dwell lightly upon the required elements for production of maximum crops.

## SWIFT'S PLANT FOOD.

An odorless concentrated soluble fertilizer for house plants. A package is sufficient for 30 plants for 3 months. 5 lbs., 40c; 10 lbs., 70c.

## FRUIT AND ROOT CROP GROWER.

For fruit trees and small fruits, garden truck, tobacco, potatoes, sugar beets, etc. Quick in starting, lasting in effect, giving firm, healthy growth and developing the fruit. Use 250 to 500 pounds per acre. Analysis, 2-10- $\frac{1}{2}$ . 125 lbs., \$3.50; 250 lbs., \$6.75; 500 lbs., \$13.00.

## POTATO GROWER.

This fertilizer is of special use for the potato crop and is also adapted for sweet potatoes, vines, fruit trees, and all leguminous plants. It contains lots of potash—just what potatoes need. Use it at the rate of 250 to 500 pounds per acre. Analysis, 3-8. 125 lbs., \$3.75; 250 lbs., \$7.00.

## GRAIN GROWER.

For general farm use, but especially adapted for the growing of all cereals. Use at the rate of 250 to 500 pounds per acre. Analysis, 2-8-2. 125 lbs., \$3.50; 250 lbs., \$6.75.

## CORN GROWER.

Contains a large percentage of phosphoric acid and potash, the most essential elements in the production of a maximum corn crop. Nitrogen is also supplied in sufficient quantity to form a well-balanced complete fertilizer. An excellent brand for black soils. Use 250 to 500 pounds per acre; half broadcast, balance in hills or drills, mixing thoroughly with the soil before planting. Analysis, 1-12-1. 125 lbs., \$3.45; 250 lbs., \$6.50; 500 lbs., \$12.50.

## SHEEP MANURE.

This fertilizer is dry, pulverized and screened and all undigested weed seeds have been destroyed so they cannot under any circumstances germinate. The analysis is: Ammonia, 2.73 per cent; phosphoric acid, 1.75 per cent; potash, 1.50 per cent; humus, 90 per cent. This is one of the best and strongest fertilizers. It produces steady and rapid growth and is very convenient to handle and easy to use. There is no objectionable odor. It is especially desirable for lawns, but is also one of the best fertilizers for truck gardens and for green-houses. 100 lbs., \$2.50; 500 lbs., \$11.00.

## BONE MEAL.

**Highest Grade.**—It is ground fine and is an excellent top dressing for lawns, grass lands, farm and field crops, also for mixing with potting soil.

## AMMONIA OR NITROGEN.

Tends to promote leaf or foliage growth. You will find it in various combinations. In the form of salts or nitrates, it is readily available. All Ammoniates must be reduced to soluble salts by the soil bacteria before they can be taken up by the plant. By the application of Ammonia on land that is low in humus, the general foliage and root growth is stimulated and the amount of vegetable matter in the soil is multiplied many fold; in other words, humus is grown.

## PHOSPHORIC ACID.

Tends to ripen the plant earlier, bring out full, solid kernels in grain and give color to fruits and vegetables. A moderate application of Phosphoric Acid, in hastening maturity, will get your fruit and vegetable crops on the market ten days or two weeks earlier than if not fertilized. This will often more than double returns from your crops.

## POTASH.

The importance of this element should not be overlooked. It acts as a strong feeling tonic to all crops, giving healthy body to grain and luscious flavor and high color to fruit. In the form in which we carry it, it is a wonderful insecticide and fungicide. For root affections of grain and forage crops and scab, etc., of potatoes and other truck it is unequalled; no market product, the keeping qualities and general appearance of which is desired to be first-class, should be grown without an application of Potash.

## NITRATE OF SODA.

Nitrate of Soda is not a substitute for other manures, but we recommend it as the cheapest and best form in which to apply Nitrogen to plants. Gardeners who are using farm manure should continue to use it, but use Nitrate of Soda in addition to other fertilizers. If your object is to grow maximum crops, you must in some way furnish the plants with Nitrogen. No matter what manure or fertilizer is used, the Nitrogen must be converted into Nitrate before the plants can use it. Price, (subject to market changes), lb., 15c; 5 lbs., 65c; 10 lbs., \$1.15; 25 lbs., \$2.50.

**For Lawns.**—Pulverized Sheep Manure is the best possible fertilizer for the lawn. It should be applied by sprinkling lightly over the grass, same as one would sow grass seed. It requires no raking in. The color is not conspicuous and there is no objectionable odor.

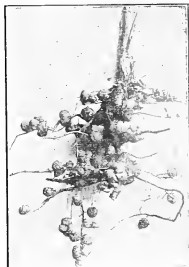
**For the Garden.**—After the crop has been harvested in the fall, the garden should be given a good coating of Sheep Manure. In the spring put on another light coat and turn it under, or sow lightly in the rows. By the use of this fertilizer large crops will result; they will mature early and they will be of superior quality. This product is the best fertilizer for the home garden yet offered.

**For Public Parks.**—Sheep Manure is used on some of the best public parks in this country, including the beautiful park system of Kansas City. It is more efficient, easier to apply, and has less odor than other fertilizers, and does not have to be raked in.

**For Truck Garden.**—Sheep Manure is the best fertilizer for the truck garden, producing better and earlier crops of onions, celery, and other vegetables.

**For Flower Beds.**—Free blossoming can be induced, or increased, by judicious use of Sheep Manure. Sprinkle it carefully in the beds, and both foliage and blossoms will be large and vivid in color. A teaspoonful or so stirred in the soil about the roots of each plant two or three times during the season will give you astonishing results. Always water plants thoroughly after fertilizing.





## STANDARD INOCULATING BACTERIA



Standard Inoculating Bacteria are grown direct from the nodules. All bacteria sent out are of the second generation from the nodules. This laboratory technic in the preparation of these cultures insures the highest possible virility and therefore positive inoculation and an abundance of nodules. It is a fundamental of bacteriology that the further removed from the initial germ the less virile. Bacteria planted and replanted to generations far remote cannot and do not insure healthy inoculation, and use of such often results in failure. Standard cultures bred direct from the nodules and furnished to you only one generation removed from such

nodule is what has placed them at the head of the list of all legume cultures and caused them to be the most widely used in the United States.

Standard cultures are not cheap cultures; they may be cheaper in price than some, but in price only. The price is still consistent with high quality. They cannot be made better, even if ten times the price were offered. Every package is fully guaranteed.

Not only in virile properties do Standard cultures excel, but the character of the containers has much to do with preserving and insuring such virility right up to the time of use. They are put up in an amber-colored bottles (excluding the blue light ray, which is deadly to many germs), with rubber corks and with glass air tubes and cotton filters. Thus prepared, all foreign and destroying germs are excluded, yet the nitro bacteria within the bottles are fed with sufficient nitrogen to keep them alive and virile even for years.

All legume crops should be inoculated. Few soils contain sufficient bacteria to provide self-inoculation. Artificial inoculation with pure cultures has long since been determined by the experiment stations to be the only safe and sure way. Few soils, unless heavily fertilized, contain enough nitrogen to carry a legume crop to maturity and a maximum yield unless the proper inoculating bacteria be present in the soil and active. Inoculated legumes take their supply of nitrogen from the air, and not only feed themselves during growth, but store up a surplus in the nodules formed on the roots as a supply for succeeding crops. But unless such proper bacteria are supplied or present there will be no nodules, neither will the crop be a maximum. A good legume crop will store up in soil for use of future crops as much nitrogen as can be obtained for \$30.00 to \$50.00 in commercial nitrogen carrying fertilizer materials. Take no chances. Inoculate all legumes with Standard cultures.

Easy to apply. Full directions in every package.

Garden size .....	\$0.50	4-acre size .....	\$2.25
1-acre size .....	.75	6-acre size .....	3.00
2-acre size .....	1.45		

Sent postpaid on receipt of price. One-acre size sufficient for about 20 pounds of alfalfa, clover, or other small seeds, and for about 90 pounds of peas, beans, or other large seeds.



### Prepared for

Alfalfa,	Vetch,
Soy Beans,	Canada Peas,
Cow Peas,	Field Peas,
Sweet Clover,	Garden Peas,
Red Clover,	Sweet Peas,
Crimson Clover,	Garden Beans,
Alsike Clover,	Peanuts,

And all other Legumes.

When ordering, state crop to be inoculated. Standard Cultures are guaranteed by us and by the makers

**Grown Direct from Nodules.**

**Highest Possible Virility.**

**Increases the Yield.**

**Enriches the Soil.**

**Hastens Maturity.**

**Improves Feeding Value.**

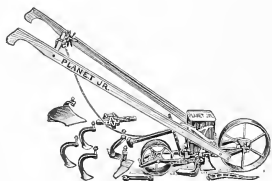
**Saves Fertilizer Bills.**

## FARM AND GARDEN TOOLS.

## Planet Jr.

## GARDEN TOOLS.

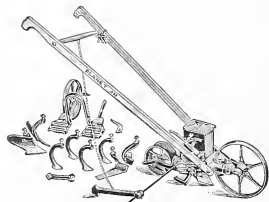
Space will not permit us to show many of the Planet Jr. Tools, but we will gladly send the complete Planet Jr. Catalogue for 1920 free on application. Planet Jr. Tools are standard, and in sending your order to us, you can rely upon getting bottom prices.



### No. 4 PLANET JR. COMBINED HILL AND DRILL SEEDER.

This accurate, durable, and easy-running tool sows all garden seeds, from the smallest up to peas and beans, in hills 4, 6, 8, 12 inches apart or in drills at the proper thickness and depth; rolling down and marking out the next row all at one passage. No time is lost. No seed is wasted. By removing the seeder parts and substituting the tool frame, you have a first-class single wheel hoe, with a set of specially hardened steel tools, the best made.

No. 4 Planet Jr.—Combined Hill and Drill Seeder, Wheel Hoe, Cultivator, and Plow.....\$19.50  
No. 4D Hill and Drill Seeder—Same as above, less the cultivating attachments..... 15.50



### No. 25 PLANET JR. COMBINED HILL AND DRILL SEEDER.

This combination is intended for gardeners who have a large enough acreage in crops for a double wheel hoe to be used to good advantage, and yet prefer not to buy seeders and wheel hoes separately; and for the family garden where a double wheel hoe is preferred.

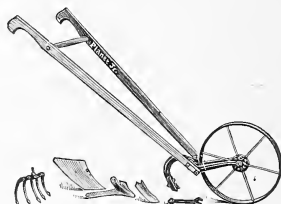
As a Seeder, it is practically the same as the Planet Jr. No. 4 and as a wheel hoe has the same steel frames and cultivating attachments as the Planet Jr. No. 12 Double Wheel Hoe.

No. 25 Planet Jr. Combined Hill and Drill Seeder—Double Wheel Hoe, Cultivator, and Plow.....\$23.00

### No. 12 PLANET JR. DOUBLE AND SINGLE WHEEL HOE.

A Single and Double Wheel Hoe in one. Straddles crops till 20 inches high, then works between. Has steel frames and 14-inch steel wheels. The greatest hand-cultivating tool in the world.

No. 12 Planet Jr. Double and Single Wheel Hoe....\$12.50



### No. 19 PLANET JR. WHEEL HOE.

This attractive implement is especially designed for the farmer's garden work, though it offers to everyone with either field or garden a cheap and effective tool for wheel hoe operations. The high wheel makes easy running; the standard is slotted for depth-regulation and an adjustable malleable piece carries any of the steels that go with the machine. The cultivating tooth does deep work and marks out rows for onion sets, plants, etc. The sweep is fine for level work. For wide rows, go twice to the row as needed. The plow marks out furrows, covers them, and plows to or from the crop as wanted. Use the five-prong attachment for both deep and shallow work. The great variety and fine shape and quality of the tools make the implement light-running and effective. It is strong, well made, and quickly adjusted. The height of the handles can be changed to suit man or woman, boy or girl.

No. 19 Planet Jr. Wheel Hoe.....\$6.25



No. 90 Planet Jr. 12-Tooth Harrow and Pulverizer...\$20.00

No. 90B, without Pulverizer..... 16.75

No. 90D, without Pulverizer or Wheel..... 13.00

Planet Jr. Twelve-Tooth Harrow and Cultivator.—A special favorite with strawberry-growers, market gardeners, and truckers. Price complete, \$17.50; without pulverizer, \$14.50.

Planet Jr. No. 17.—Single Wheel Hoe. The Planet Jr. No. 17 Single Wheel Hoe is suited to all kinds of garden crops. Notice the number of attachments it has. Others can be added. Steel frame. Price, \$8.75.

No. 17½.—Same as No. 17, excepting it has no plow. Steel frame. Price, \$7.60.

### No. 13 DOUBLE WHEEL HOE.

This tool is the No. 12 with 6-inch hoes only, these being the tools that are most used. Any of the attachments shown with No. 12 may be added at any time.

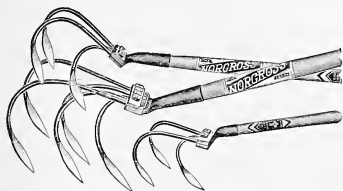
No. 13 Double Wheel Hoe.....\$9.00

### 72-PAGE PLANET JR. CATALOGUE FREE.

Describes 70 tools, including Seeders, Wheel Hoes, Hoes, Harrows, Orchard, and Beet Cultivators. Write postal for it.

You can't afford to farm without Planet Jr. Tools. They do the work of three to six men—do it better, give bigger results, and last a lifetime. Over two million farmers and gardeners are using them. Join their ranks now and share their success and fully guaranteed.

## FARM AND GARDEN TOOLS.



## NORCROSS FIVE-PRONG GARDEN CULTIVATOR.

Two Tools in One.

The Norcross is made of first-class material and finely finished. Prongs are made of  $\frac{1}{4}$ -inch spring steel, handles white ash. Perfectly adjustable for all kinds of work. Every part is detachable. The center shovel can be quickly removed and the row straddled. Where rows are close together, the three inside shovels may be used. Loosening two nuts releases any one of the prongs to be removed. Detaching center shovel and reversing other four makes potato digger. Pulls weeds, pulverizes the soil thoroughly, giving level cultivation. It is light, very durable, easy to handle, and does most excellent work. It can be quickly attached to wheel plow for use by large gardeners. Weight each, 3 pounds. Packed 6 in a bundle, crated.

No. 55.....Each, \$1.50

## NORCROSS THREE-PRONG GARDEN CULTIVATOR.

The Norcross Three-prong Cultivator Hoe is a modification in size, weight, and price of the five-prong, shown above. It has white ash handle. The prongs are detachable in the same manner as the five-prong, and the quality and finish is the same high grade. In cultivating, it will outclass the common hoe from every standpoint. Packed six in a bundle, crated. Weight each, 2 pounds.

No. 33.....Each, \$1.10

## NORCROSS WEEDER.

This Weeder is practically the same as the other Norcross Cultivators, except in size. It has a 9-inch handle, and is designed for use around flowers, shrubbery, etc., where a long-handled tool is not practical. Excellent for use in strawberries and other low-growing plants. Prongs are  $\frac{3}{16}$ -inch spring steel bent cornerwise and attached to malleable head by two bolts. Easily detachable. Weighs 12 ounces. Finished same as other Norcross Cultivators.

Packed one dozen in a bundle.

No. 11.....Each, \$0.40

## THE PRINCESS PLOW.

The Princess has two wood handles, and is designed mechanically correct throughout, with a view to making it the neatest and lightest-running Plow possible.

It is so constructed that the upright beam may be changed to vary the angle of the tools in the ground. This is an important feature. Handles are also adjustable.

It is equipped with four attachments and wrench, one oval shovel 4 inches wide and 8 inches long, one moldboard, one shovel 2 inches wide, and one malleable three-shovel weeder.

Wheel is 24 inches high, steel spokes and 1-inch tire, with tong hub.

No. 40—Complete, as shown.....Each, \$5.00  
Shipping weight, 19 pounds.

## THE RIVAL PLOW.

The Most Popular Balance Frame Plow on the Market.

It is safe to say that there is no similar tool made that in ease of operation, high grade material, and fine finish will equal the Rival. The beam is made of a very stiff steel and is constructed so that when handles are attached the center of weight falls directly over the pivoting point which forms the axle for wheel, making it self-balancing, and which admits of its being propelled with a minimum of power. On account of the handles being bolted to beams in front of the axle, it has a pulling tendency, rather than to push it into the ground. Handles can be raised and lowered to suit man or boy. It has such wide adjustments of the handles that the tool can be put in the ground at almost any angle desired. The different extras used on the Rival are shovel, calf tongue, weeder, moldboard, and rake, as shown. Wheel is 24 inches in height, made of steel wire spokes, and  $\frac{1}{2}$ -inch steel tire. The Rival does excellent work. Handles are painted red, the iron part green, and the wheel aluminum. Dealers will find this a fine seller. Weight each, 23 pounds.

No. 76—Complete, with five Tools, as shown.....Each, \$5.00

## Repairs for Rival Plow.

No. 101—Handles, with bolts and braces.....Per Pair, \$1.40  
No. 102—Shovels.....Each, .50  
No. 103—Calf Tongues.....Each, .40  
No. 104—Moldboard.....Each, .50  
No. 105—Weeder.....Each, .50  
No. 106—Rake.....Each, .50  
No. 107—Wheel.....Each, 1.50  
No. 108—Round for handles.....Each, .10

## GARDEN HOE.

Especially high grade, bright razor steel blade. Each, 75c.  
Solid socket, cast steel. Each, 60c. Riveted shank,  $7\frac{1}{2}$ -inch blade. Each 25c.

Boys' Hoe.—6-inch blade. Each, 55c.

Ladies' Hoe.—5-inch blade. Each, 50c.

Warrior.—Best garden Hoe; V-shaped blade. Each, 85c.

Scuffle Hoes (American).—8-inch blade, 6-foot handle.  
Each, 75c.

Dutch Scuffle Hoes.—6-inch, each, 65c; 7-inch, each, 75c;  
8-inch, each, 80c.

Weeding Hoe.—Four-prong, steel. Each, 75c.

Combination Hoe and Rake.— $4\frac{1}{2}$ -inch cut, four teeth,  
each, 65c;  $6\frac{1}{2}$ -inch cut, six teeth, each, 75c.

## RAKES.

Steel Garden.—Forged in one piece; teeth spring-tempered;  
bows well braced. Hardwood handles.

## GRASS SHEARS.

Very handy and useful for trimming lawns, around trees,  
and in corners where a lawn mower can't get. Made of best  
quality steel. Each, 60c.

## TROWELS.

Short-Handled.—Shank and scoop one piece, tempered  
steel. Hardwood handles. Each, 40c, by express.

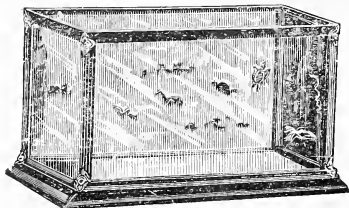
Long-Handled.—Similar to above, but with 9-inch handles.  
Each, 60c, by express.

## SICKLES.

Light, strong, and durable. Steel blade, thoroughly tem-  
pered. Each, 65c, by express.

**GOLD FISH AND AQUARIUMS.**

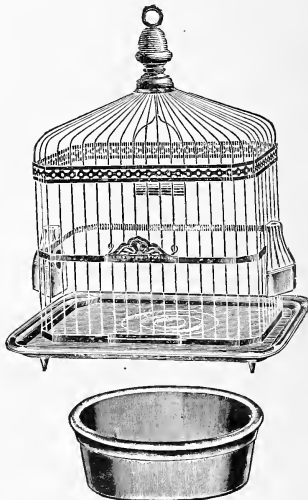
We have a good supply of Gold Fish, plain and fancy, of all sizes, Aquariums, and Fish Supplies.

**CANARIES.**

A fine line of Canaries, with beautiful plumage. The Marlow Seed Company guarantee good singers.

**BIRD CAGES AND SUPPLIES.**

A beautiful assortment of Wire, Brass, and Wicker Cages of all sizes, to house them in, also a full and complete supply of Bird Supplies.

**BIRD SEED.**

**Rape Seed.**—Per lb., 25c, postpaid; 50 lbs., \$8.00, not prepaid.

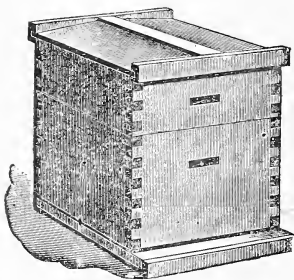
**Hemp Seed.**—Per lb., 25c, postpaid; 50 lbs., \$8.00, not prepaid.

**Canary Seed.**—Lb., 35c, postpaid; per 50 lbs., \$12.00, not prepaid.

**Mixed Bird Seed.**—Composed of Canary, Hemp, Rape, and Lettuce. Lb., 30c, postpaid.

**JARDINIERS, BASKETS, ARTIFICIAL FLOWERS.**

A beautiful assortment of Flower Jars, Jardinieres, Pots, and fancy Baskets. We have taken the agency for a beautiful line of fancy Artificial Flowers as near to real as a person ever saw. Will last a long time and will make a nice decoration for any room in the house. We will be delighted to quote you prices on any of these articles.



**One-story Hive with Metal Cover.**

Another reason is the indication that the season in most localities will open earlier than usual. Throughout all the northern half of the United States there has been hardly a touch of winter up to the time when this catalog goes to press, and bees are reported to be wintering exceptionally well. This means unusual activity at the very opening of the season. Strong colonies will produce big yields. **Don't run the risk of losing a big early crop through lack of preparedness.** It is the policy of this Company to serve its customers, new and old, as carefully and as promptly as possible, but we are faced with a demand that will tax our capacity.

You, too, will want ROOT'S QUALITY BEE SUPPLIES—therefore, co-operate with us by

**SENDING YOUR ORDERS NOW.**

**Marlow Seed Co., Wichita, Kansas.**

**BUY BEE SUPPLIES EARLY.**

This season, more than ever before, the wise beekeeper will order a full line of Bee Supplies well in advance of the time when they will actually be required. There are innumerable reasons why this should be done. **First of all, the demand for ROOT'S QUALITY BEE SUPPLIES will undoubtedly be greater this year than ever before in the history of our business.** During the past four years our foreign trade, which has grown to considerable proportions, has been comparatively small. Now that the world is at peace once more and the production of food-stuffs of every description given new impetus by the bitter experience of the great war, beekeeping is sure to be practiced in every country in the world more extensively and more intensively than ever before. Already we are afforded an indication of what the demand will be.

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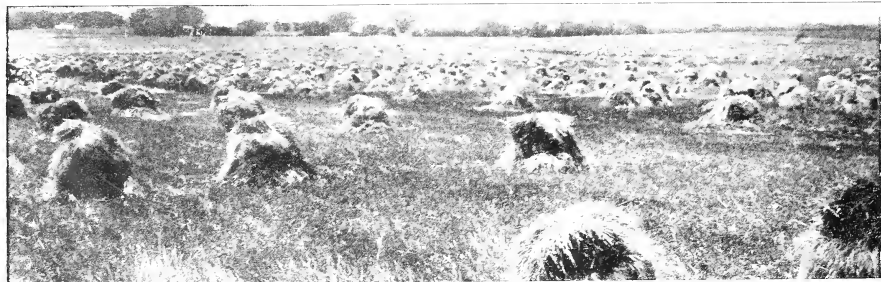
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SORGHUM FOR WINTER FEED



KNEE-DEEP IN ALFALFA



A FIELD OF KANSAS WHEAT



SWEET CLOVER—4½ TONS PER ACRE, FIRST CUTTING